

TIROS VII RADIATION DATA CATALOG AND USERS' MANUAL

Volume 2

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**TIROS VII
RADIATION DATA CATALOG
AND
USERS' MANUAL**

**VOLUME 2
OCTOBER 1, 1963 – FEBRUARY 29, 1964**

**By
Staff Members
of the
Aeronomy and Meteorology Division
Goddard Space Flight Center
National Aeronautics and Space Administration**

December 31, 1964

FOREWORD

The quantity of radiation data already acquired from TIROS VII exceeds several times over the total quantity acquired from any of the previous TIROS radiation experiments, and as of this writing data are still being acquired. As a result, the TIROS VII Catalog-Manual is being published in several volumes. Each volume of this series contains time-dependent information for the specific time period covered by the volume concerning radiometer response patterns, possible corrections for instrumental degradation, the Index of Final Meteorological Tapes, and Subpoint Track Summaries. This, the second volume, covers the time period October 1, 1963 to February 29, 1964. Subsequent information covering time periods after February 29, 1964 will be covered in succeeding volumes. The first volume of this Catalog-Manual contains general discussions about the nature of the experiment, the calibration, and the processing, coverage, and documentation of the data, in addition to specific information concerning the period from launch on June 19, 1963 to September 30, 1963.

Many members of the staff of the Aeronomy and Meteorology Division contributed to the success of the TIROS VII medium resolution radiometer experiment. Valuable contributions in the area of computer programming for data processing came from the National Weather Satellite Center, U.S. Weather Bureau, whose efforts are gratefully acknowledged.

The task of assembling the information contained in this manual into written form suitable for publication was largely accomplished by the following members of the Aeronomy and Meteorology Division:

Mrs. Musa Halev Pasternak, Editor
Mr. W. R. Bandeen
Mr. Robert Hite
Mr. George Nicholas
Mr. Harold Thompson
Mr. Frederick Woolfall

The efforts of these individuals are hereby acknowledged.

The preparation of the material presented in Appendix B was accomplished mainly through the efforts of Mr. William Fizell and Mr. David Rasmussen.

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I. INTRODUCTION

This volume contains only time-dependent information for the period October 1, 1963-February 29, 1964 concerning radiometer response patterns, possible corrections for instrumental degradation, the Index of Final Meteorological Radiation Tapes, and Subpoint Track Summaries. General discussions of the experiment, the calibration of the radiometer, and the processing, coverage, and documentation of the data are found in Volume 1.

VI. PRE-LAUNCH AND POST-LAUNCH PERFORMANCE OF THE RADIATION EXPERIMENT

6.2 *Post-Launch Behavior of the Experiment*

An unfavorable satellite-sun geometry may exist for several days at a time, permitting the direct rays of the sun to impinge upon the sensors from the wall direction momentarily once during each satellite rotation. (See Section 6.2 of Volume 1 for a discussion of this phenomenon.) There were six periods during the time interval covered by this Volume when such an unfavorable satellite-sun geometry occurred, viz., the periods including the orbits numbered 1707-1739 (TIROS VII days 115-118), 1824-1860 (days 123-126), 2698-2748 (days 182-186), 3098-3173 (days 210-215), 3297-3582 (days 223-242), and 3727-3845 (days 252-260). When solar interference was severe, the data were not reduced. However, in several orbits where there was no interference with the long-wave channels and only marginal interference with the short-wave channels the data were reduced.

6.2.1 *Channel 1*: The absolute values of most channel 1 values of ΔF during the period of Volume 2 continued to be less than 1 c.p.s. (Figure 68). Therefore the symmetrical optical degradation model was continued. As a result of the degradation curve's leveling off, the temperature corrections δT_{RB} for a given T_{RB} are nearly constant as shown in Figure

77. The correction nomograms are used in the same way as in Volume 1. As before, in addition to the temperature correction from the nomogram, a 2.5°K correction is to be added to the wall measurements, and the same amount is to be subtracted from the floor measurements.

6.2.2 *Channel 2*: All channel 2 values of ΔF continued to have an absolute magnitude less than 1 c.p.s., as shown in Figure 68. Therefore, the symmetrical optical degradation model was continued. The resulting correction nomogram is shown in Figure 78, and it is used in the same way as in Volume 1.

6.2.3 *Channel 4*: Only a few values of ΔF had an absolute magnitude greater than 1 c.p.s., as shown in Figure 68. Thus, the symmetrical optical degradation model was continued, resulting in the correction nomogram in Figure 79.

Beginning about day 140 (\sim orbit 2073) a slight difference between the equivalent blackbody temperature measurements made in the floor and the wall directions over the same region was observed, with the floor measurements being the higher. This difference increased thereafter, reaching a magnitude of about 7.0°K by day 180 (\sim orbit 2656). The floor-wall difference remained at this level beyond day 249 (at which time another aberration was observed, discussed below). This difference was observed from analog records by noting the increase of the difference between the channel 2 and 4 measurements on the wall side over those of the floor side. It was also observed in computer-produced grid-print maps of the floor and wall separately.

The mechanism for this behavior is not fully understood in view of the near-zero values of ΔF during the period between days 140-180 (cf. Figure 68). Therefore, pending further study of this effect, it is suggested that, *in addition to the nomogram corrections, after day 180 (\sim orbit 2656) 3.5°K be subtracted from measurements made through the floor and added to measurements made through the wall of channel 4. During the onset period between orbits 2073 and*

2656, it is suggested that the magnitude of this additional correction be varied linearly from 0° to 3.5°K . For example, from Figure 79, a measurement T'_{RH} of 260°K during orbit 2900 should be increased by 11.7°K and further modified by 3.5°K , yielding a corrected wall measurement of $260^\circ + 11.7^\circ + 3.5^\circ = 275.2^\circ\text{K}$ or a floor measurement of $260^\circ + 11.7^\circ - 3.5^\circ = 268.2^\circ\text{K}$.

Beginning at day 249 and continuing afterwards, the space-viewed levels became erratic, seemingly randomly changing in magnitude within one or two seconds during the space-viewed portion of a swath. Similar erratic behavior may also have occurred during the Earth-scan portion of a swath, but it was not possible definitely to separate such spurious effects from the true signal. This behavior was apparently still another manifestation of the unstable transistor in the oscillator circuit, discussed in Volume 1. This aberrant behavior increased when the housing temperature increased, and decreased when the housing temperature decreased. Also, beginning on day 299, negative-going pulses appeared in the space-viewed level. Because of these fluctuations, corrections to channel 4 data are considered reasonably valid only to day 249.

6.2.4 Channel 3: The average channel 3 value of ΔF continued to be approximately -1.25 c.p.s., indicating a small amount of electronic degradation. The compound degradation model was continued, and the correction nomogram in Figure 80 was constructed using the method described in Section 6.2.4, Volume 1. It is used in the same way as in Volume 1.

Further evidence of a shift in the oscillator transfer function of -1.25 c.p.s. is found in Figure 82. The dashed line drawn through this scatter diagram of \bar{W} measurements from channel 3 (ordinate) and 5 (abscissa) of TIROS VII, intersects the ordinate at approximately -8.5 watts/m², the negative of the value of ρ^i in the channel 3 correction nomogram.

6.2.5 Channel 5: The absolute magnitude of channel 5 values of ΔF in Figure 68 re-

mained less than 1 c.p.s. Thus, the correction nomogram in Figure 81 was constructed from the compound degradation model with a value $\rho^i = 0$. It is used in the same way as in Volume 1.

6.3 Estimate of the Accuracy of the Data

The relative and absolute accuracies of channels 1, 2, 3, and 5 have not changed from Volume 1.

Until day 249 (February 23, 1964) the short-term relative accuracy of channel 4 measurements for a given side remains at $\pm 2^\circ\text{K}$. The absolute accuracy after applying the correction nomogram and the suggested wall-floor corrections remains at $\pm 8^\circ$ until day 140 (Nov 6, 1963), and increases to $\pm 10^\circ$ from day 140 to day 249 (Feb 23, 1964). After day 249 the space-viewed level fluctuates, and no valid estimate can be made regarding either the relative or absolute accuracies of channel 4 measurements.

CONCLUSIONS

The major limitation of the TIROS VII medium resolution radiometer experiment is the uncertainty in the absolute values of the measurements, resulting from the degradation of the radiometer response and, also, from electronic degradation which, for the first time, was conclusively detected in TIROS VII. The degradation corrections given in Section VI can serve as a guide for interpreting the data in terms of absolute values. However, it must be emphasized that these corrections are only our best estimates, based upon certain simplifying assumptions, of the effects of a complicated degradation mechanism which we do not yet fully understand, and that the measurements thus corrected may still contain appreciable uncertainties.

Because of the extended lifetime of the radiometer, which as of this writing exceeds eighteen months, the potential of the TIROS VII radiometric data for climatological studies is significantly greater than it was for previous TIROS satellites. In utilizing the

measurements over extended periods, however, channel 2 and 5 data should be used in lieu of channel 4 and 3 data respectively wherever possible because of the superior stability characteristics of the former two channels. Channel 4 data are considered reasonably valid only to day 249.

The data from channels 1, 2, 3, and 5 throughout the period covered by this volume and from channel 4 until February 23, 1964 (TIROS VII day 249) are of value for studies involving relative measurements over a short period of time, for example, the contrast mapping of cloud systems.

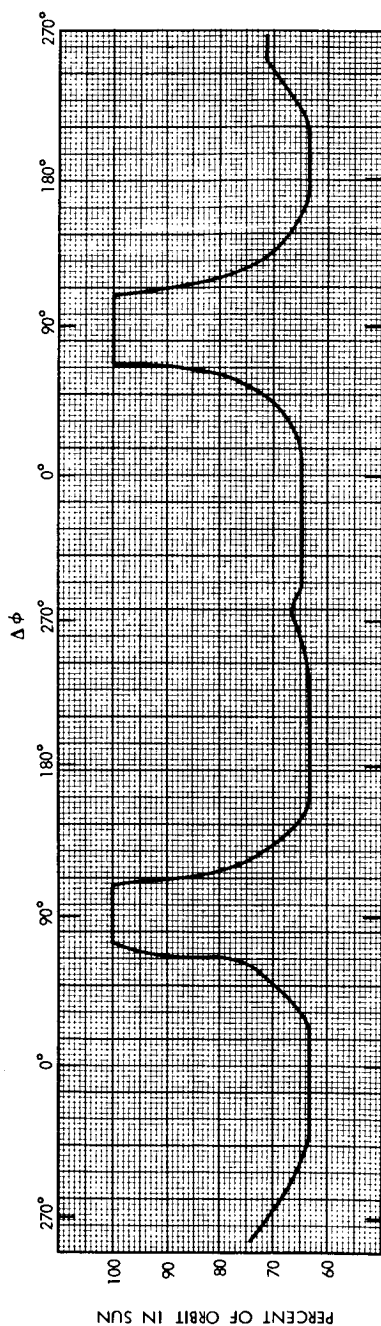


Figure 16—(a) Percent of the orbital period which the satellite spends in sunlight versus orbit number. Also shown on the upper abscissa is $\Delta\phi$, the right ascension of the sun minus the right ascension of the orbital ascending node.

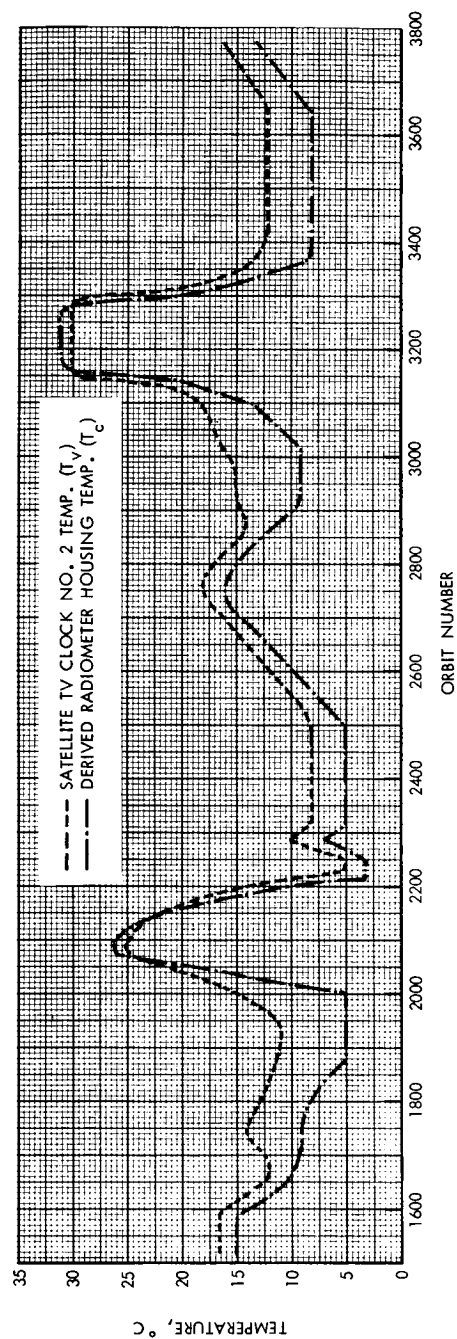


Figure 16—(b) Television clock number 2 temperature (T_v), and derived radiometer housing temperatures (T_c) versus orbit number. Telemetry of the "housekeeping information" for the radiometer ceased at orbit 1276, after which T_c was derived from T_v .

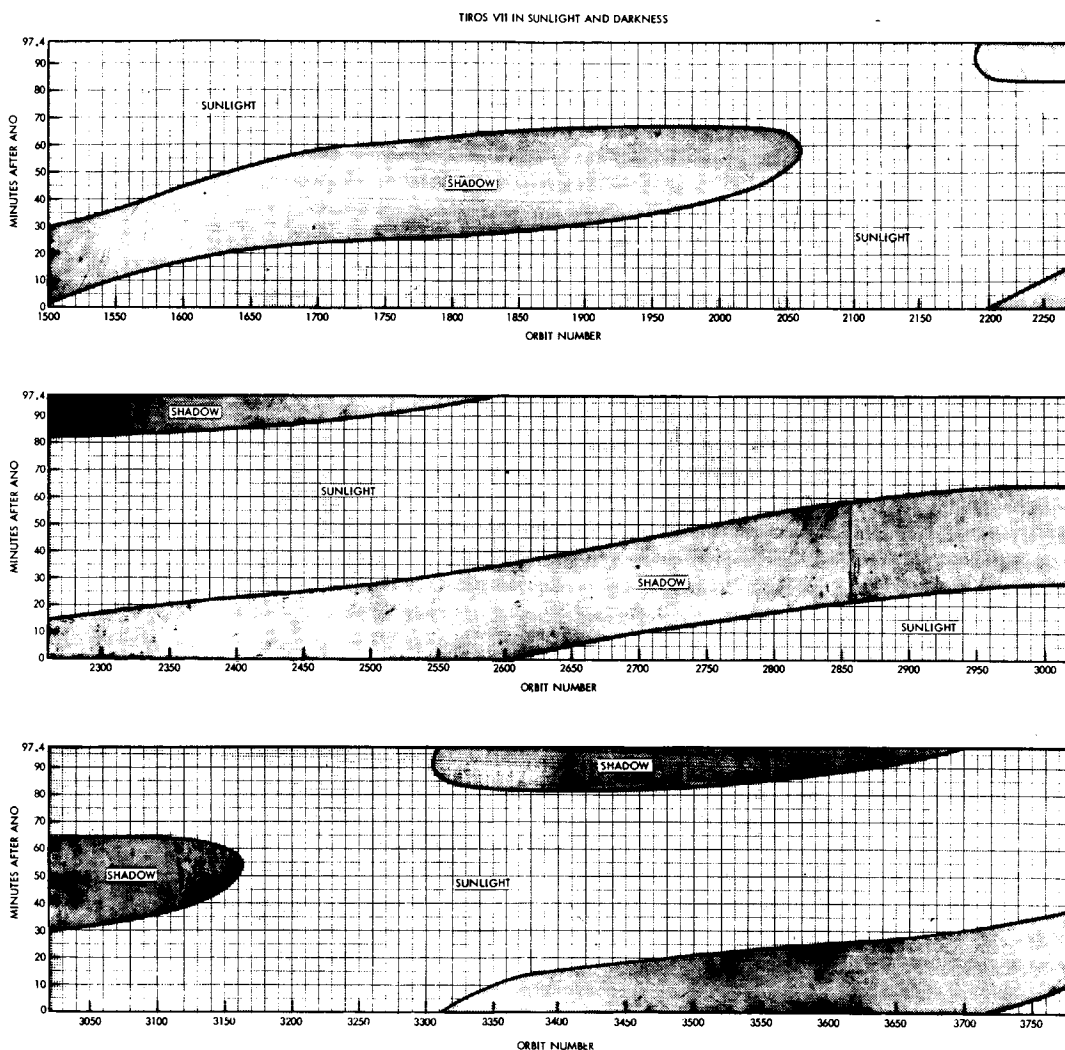
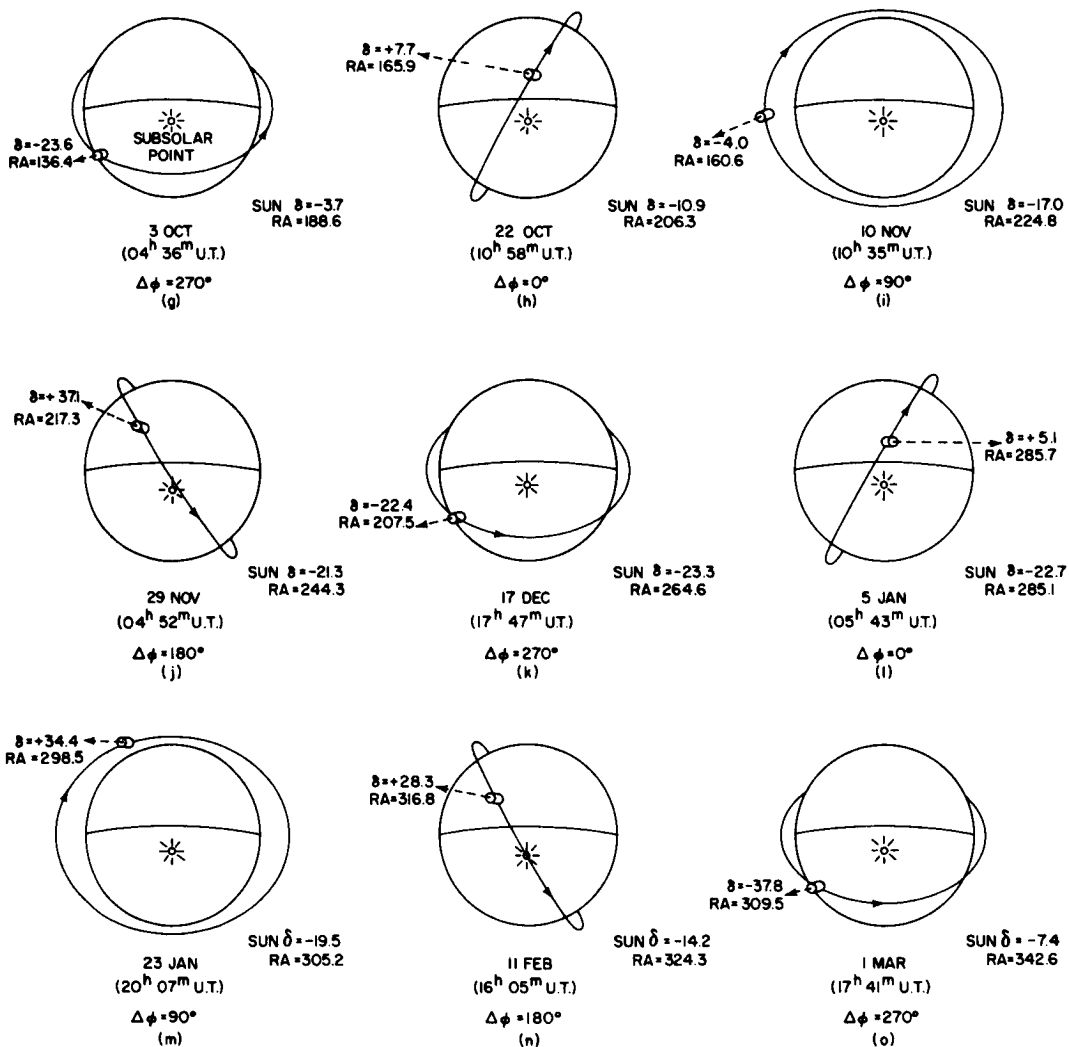


Figure 18—Portions of the 97.4-minute orbital period when the satellite is in sunlight and in the Earth's shadow, expressed in minutes after the ascending node, versus orbit number.



ALL CALENDAR DATES ARE IN 1963 AND 1964

Figure 66—(g, h, i, j, k, l, m, n, and o) Heliocentric views of the Earth and the precessing TIROS VII orbital plane. The celestial coordinates of the sun and the satellite spin vector are shown for each selected day. The time is given to the nearest minute and corresponds to the given value of $\Delta\phi$.

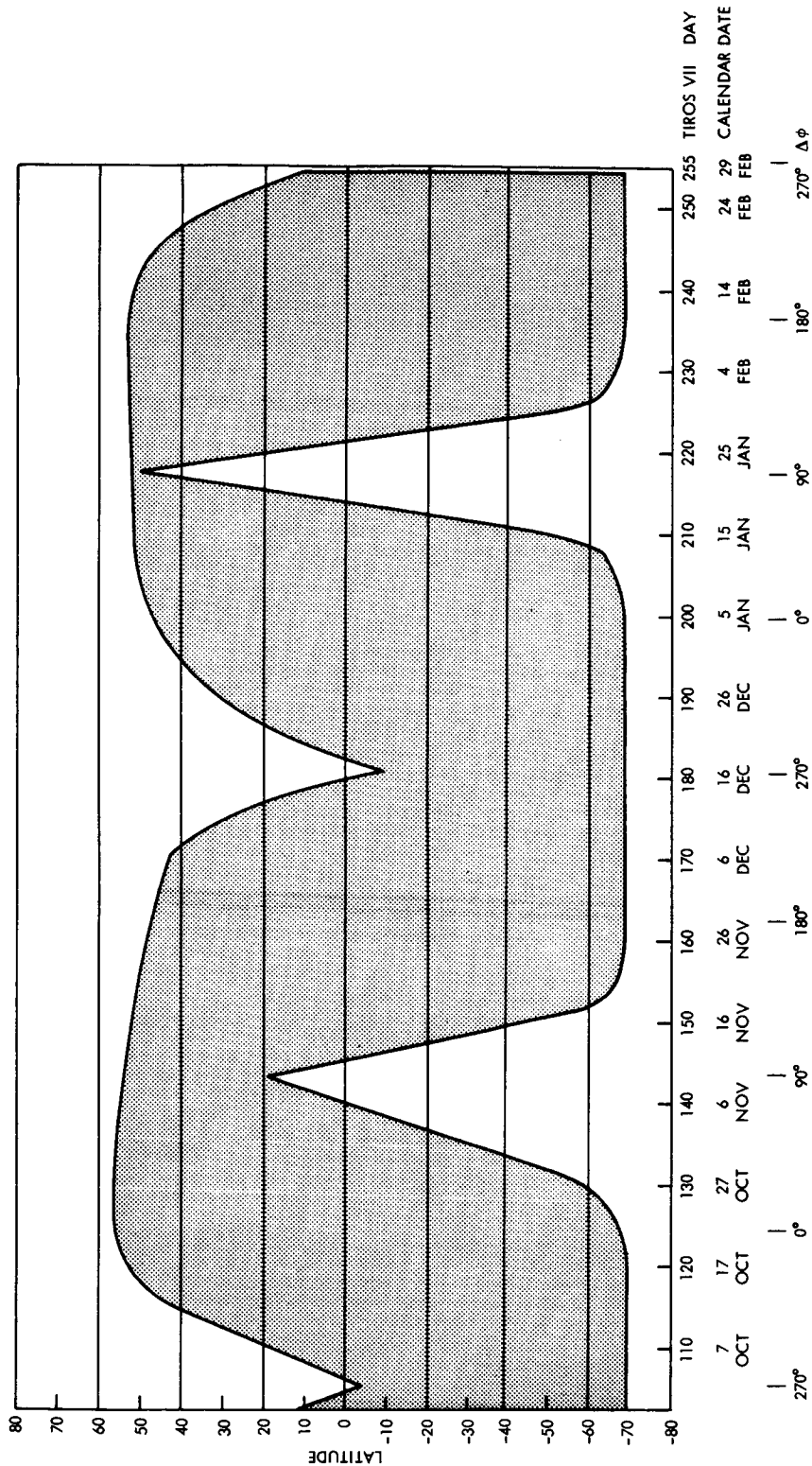


Figure 67—Solar illuminated latitudes for TIROS VII.

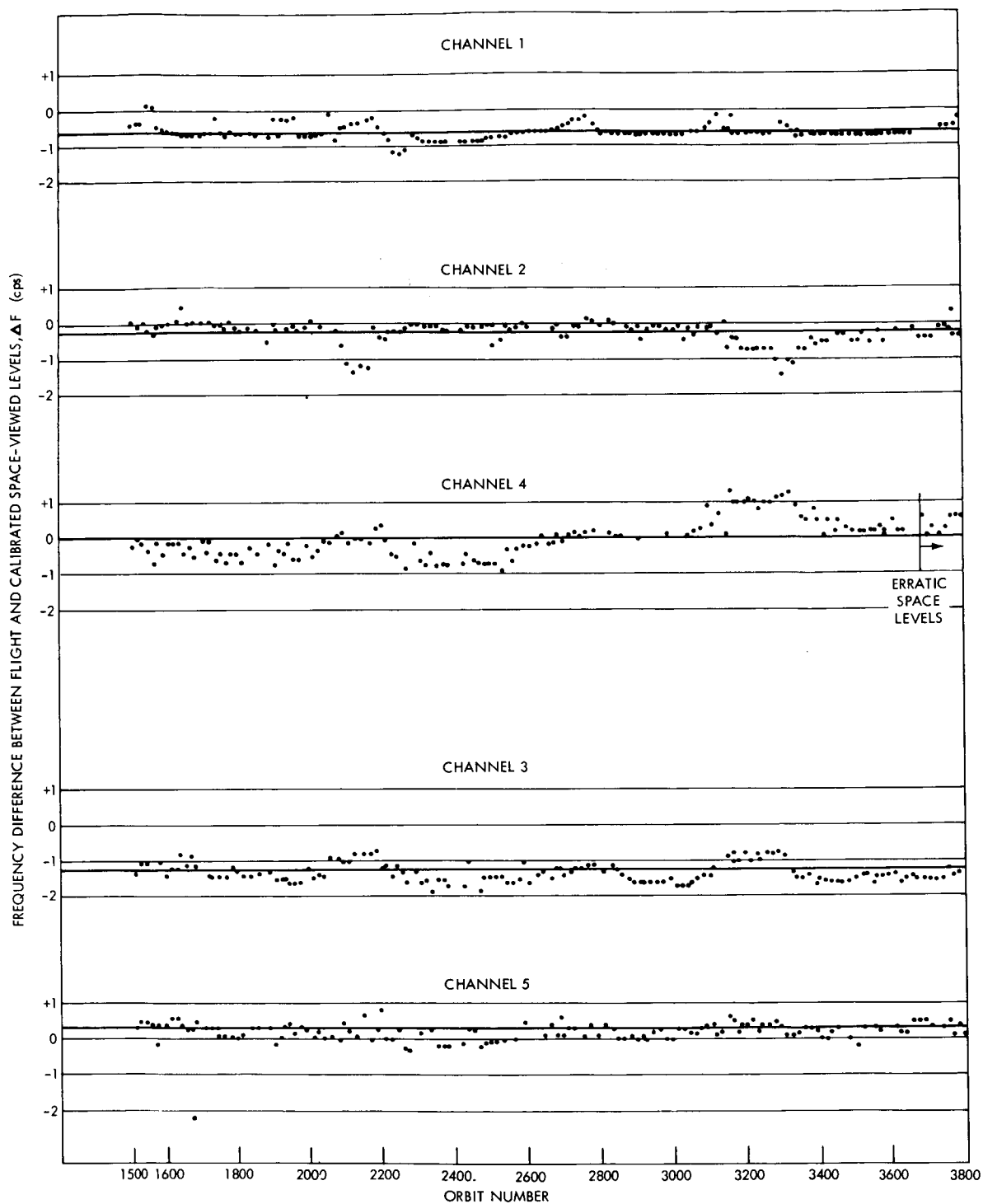


Figure 68—Frequency difference between flight and calibrated space-viewed levels vs. orbit number for channels 1 to 5.

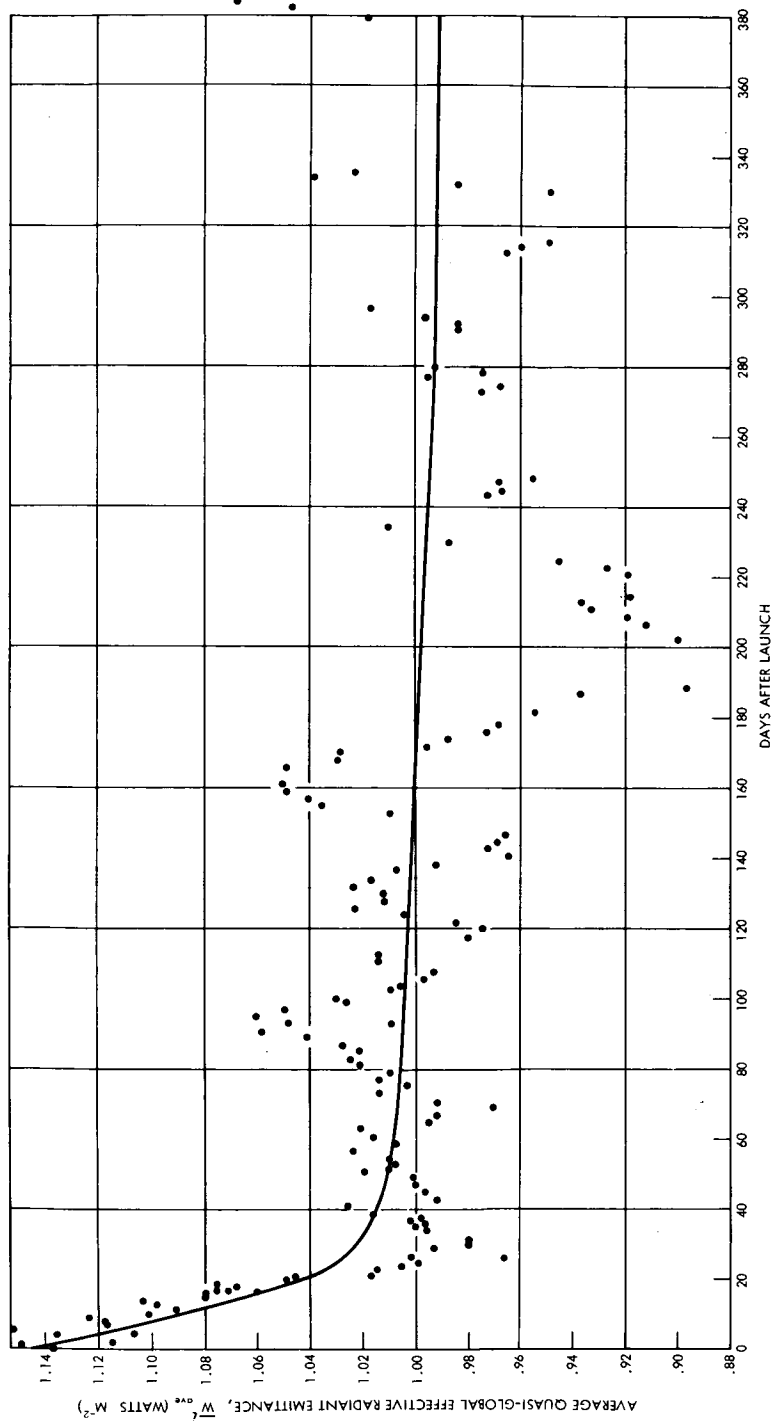


Figure 70—The average quasi-global effective radiant emittance, \bar{W}_{ave} for channel 1 vs. days after launch.

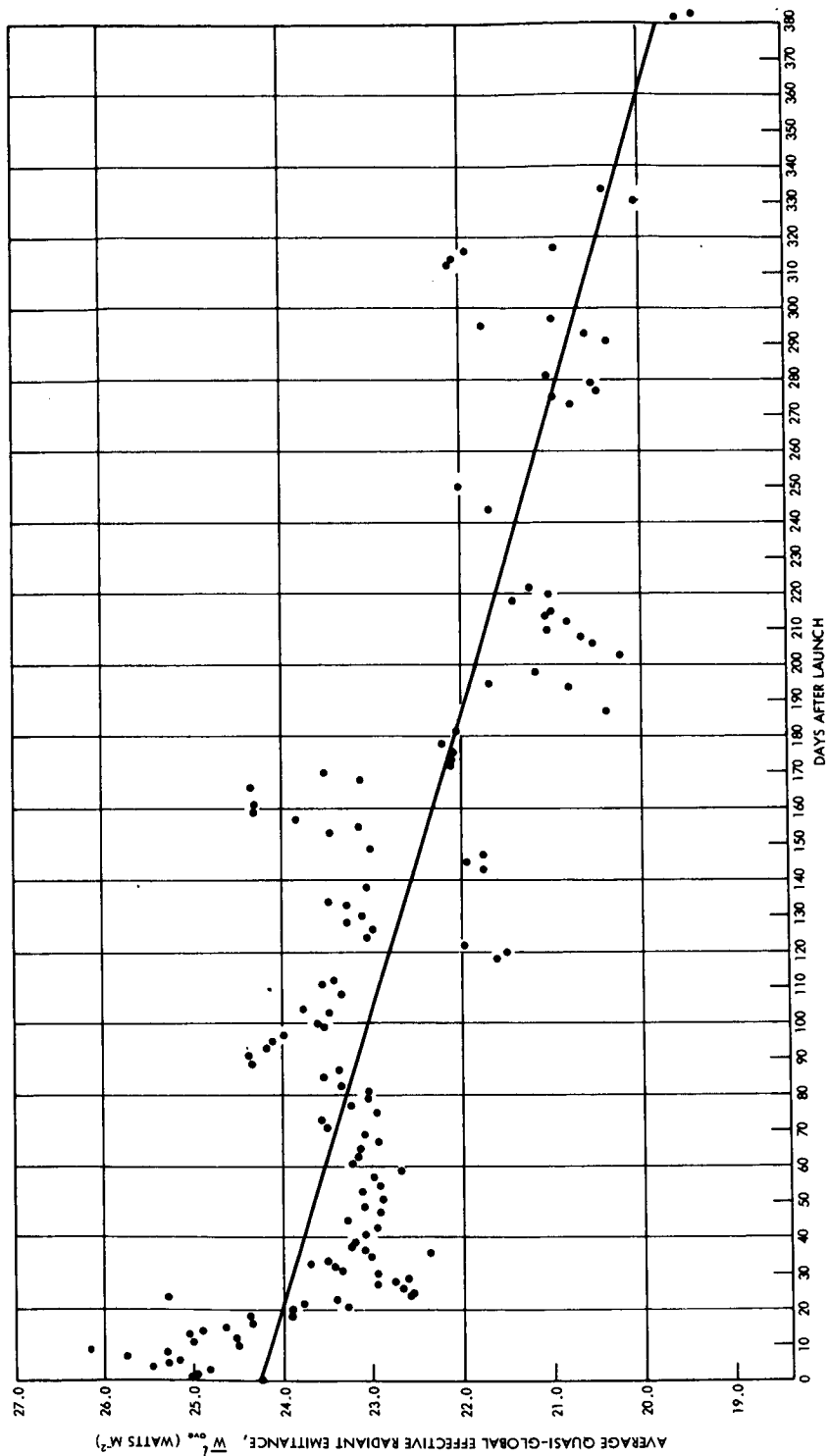


Figure 71—The average quasi-global effective radiant emittance, \bar{W}_{avg}^{\cdot} , for channel 2 vs. days after launch.

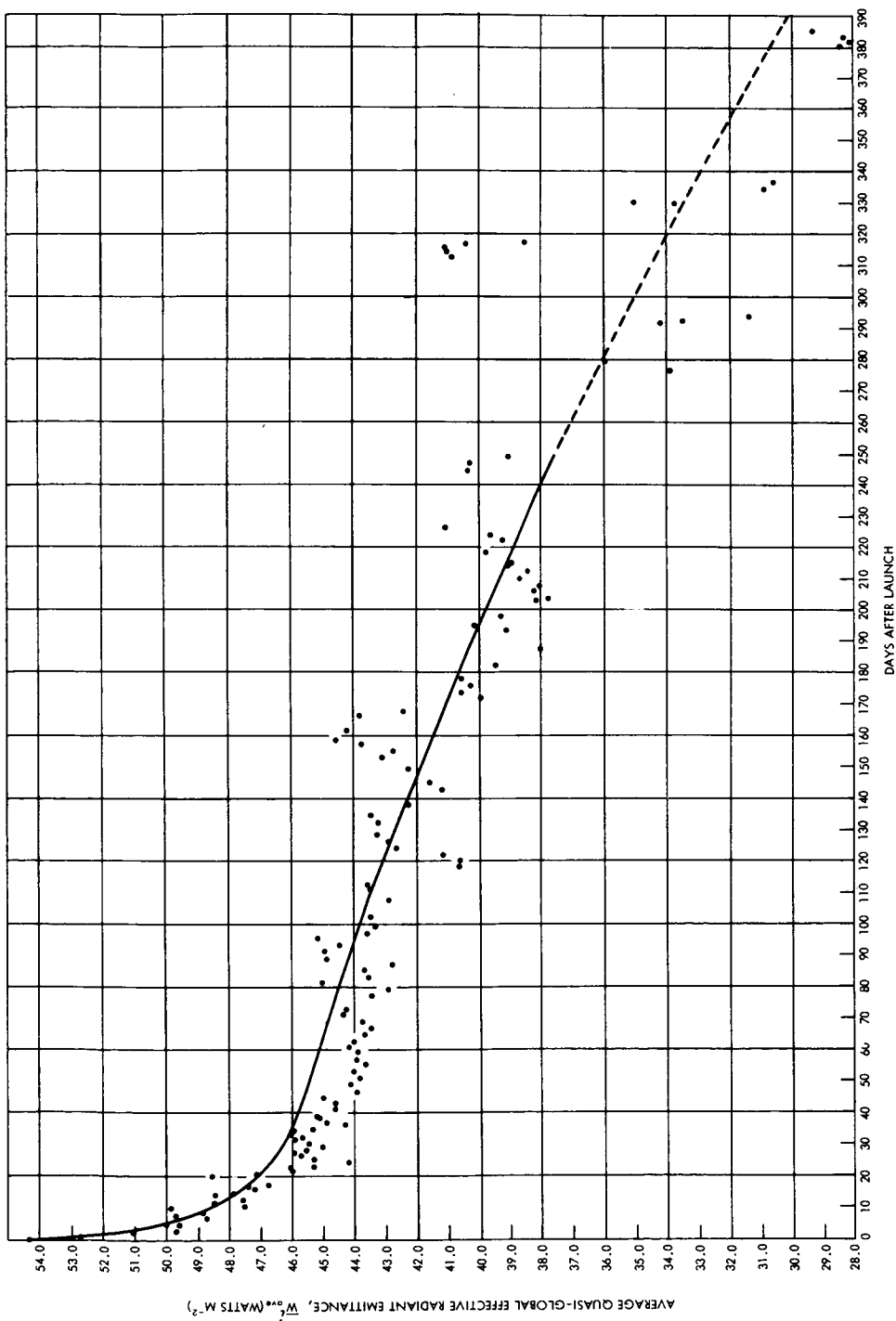


Figure 72—The average quasi-global effective radiant emittance, \overline{W}'_{avg} , for channel 4 vs. days after launch. A dashed line follows day 249 when an erratic “stepped” characteristic was first noticed in the space-viewed portions of the analog presentations of the data.

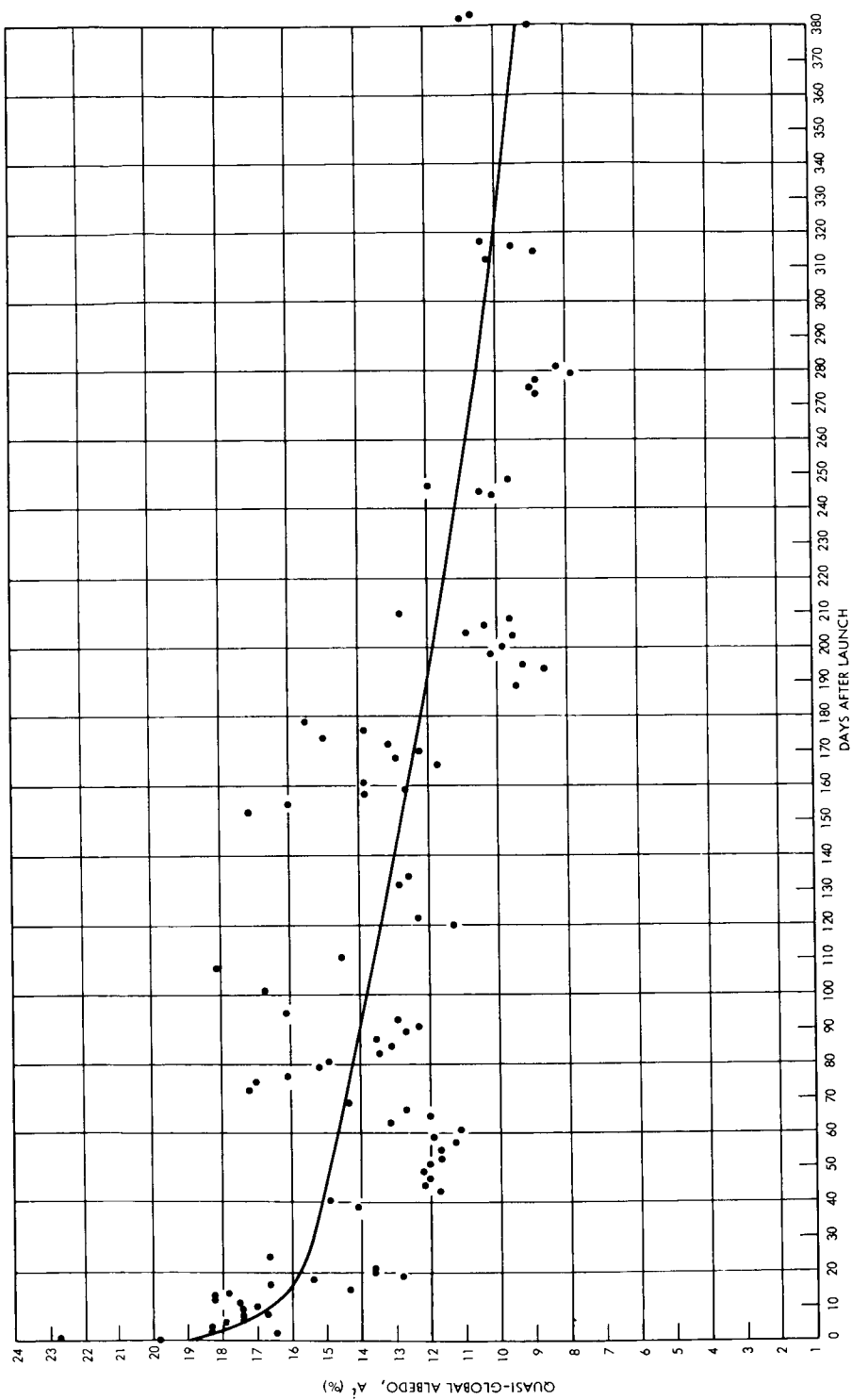


Figure 73—The quasi-global albedo, A^1 for channel 3 vs. days after launch.

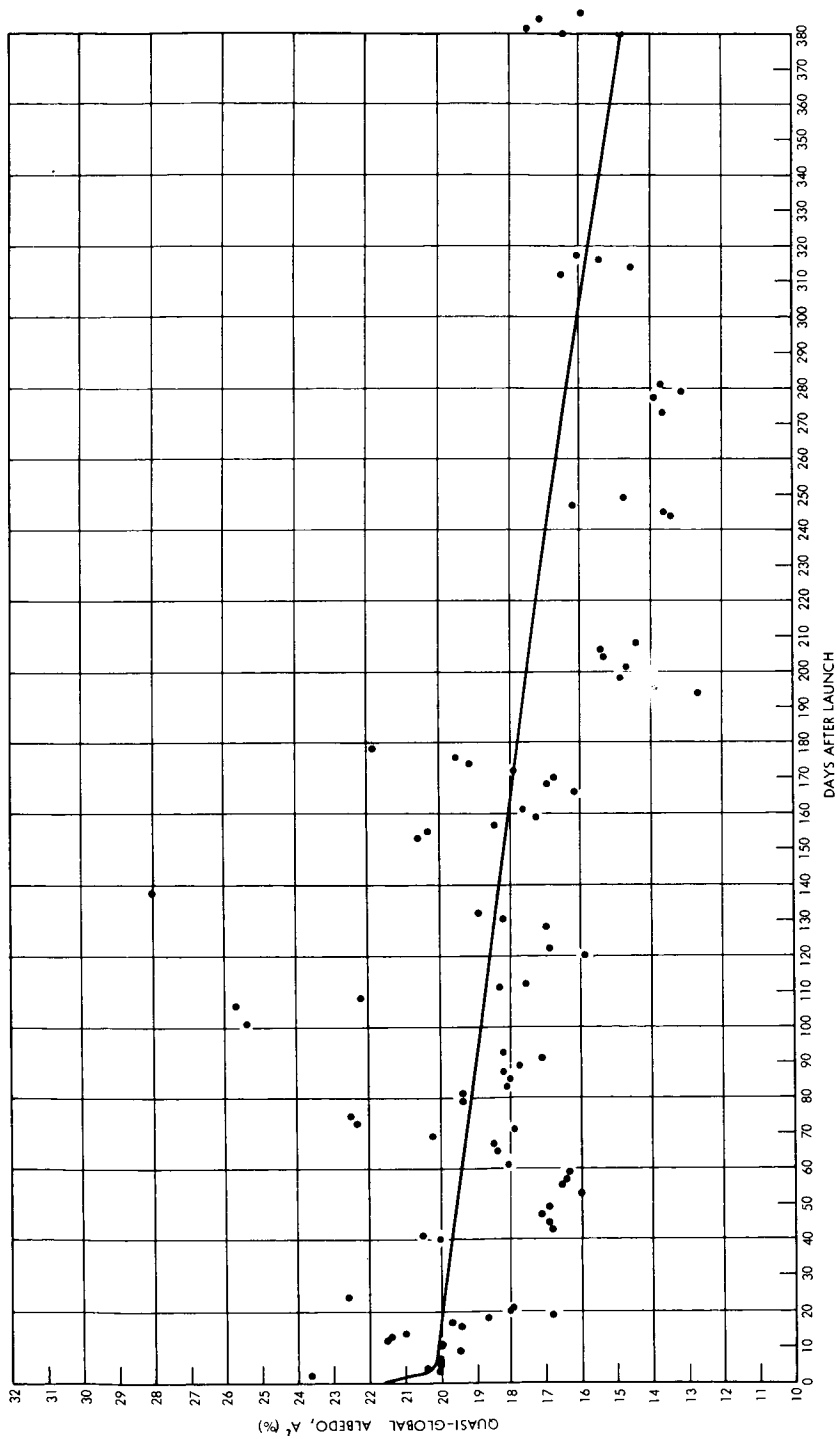


Figure 74—The quasi-global albedo A' for channel 5 vs. days after launch.

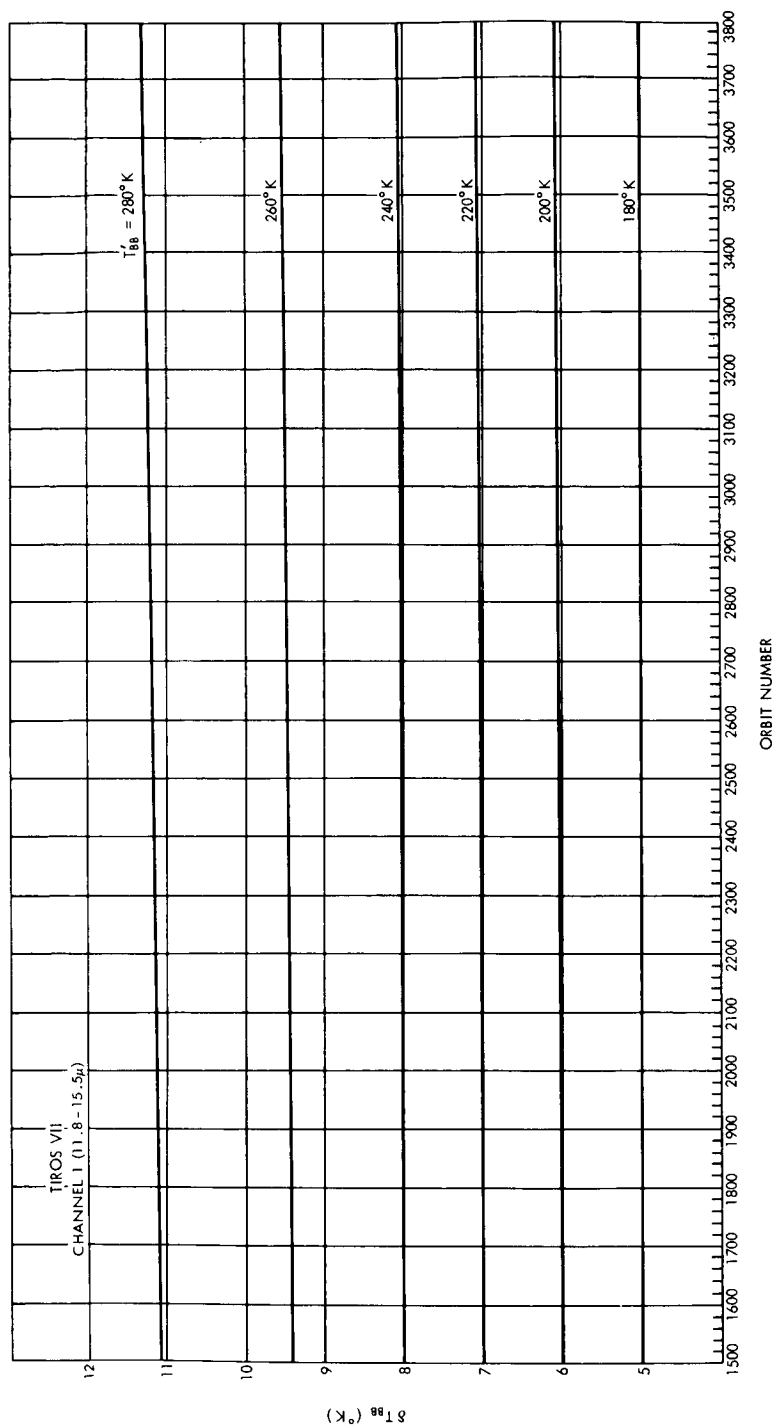


Figure 77.—Temperature corrections δT_{bb} , vs. orbit number, channel 1, both sides. An equivalent blackbody temperature measurement, T'_{bb} , should be corrected by adding the δT_{bb} value corresponding to the appropriate orbit number (There is some evidence that, in addition to the nomogram corrections, approximately 2.5°K should be subtracted from measurements made through the floor and added to measurements made through the wall of channel 1.)

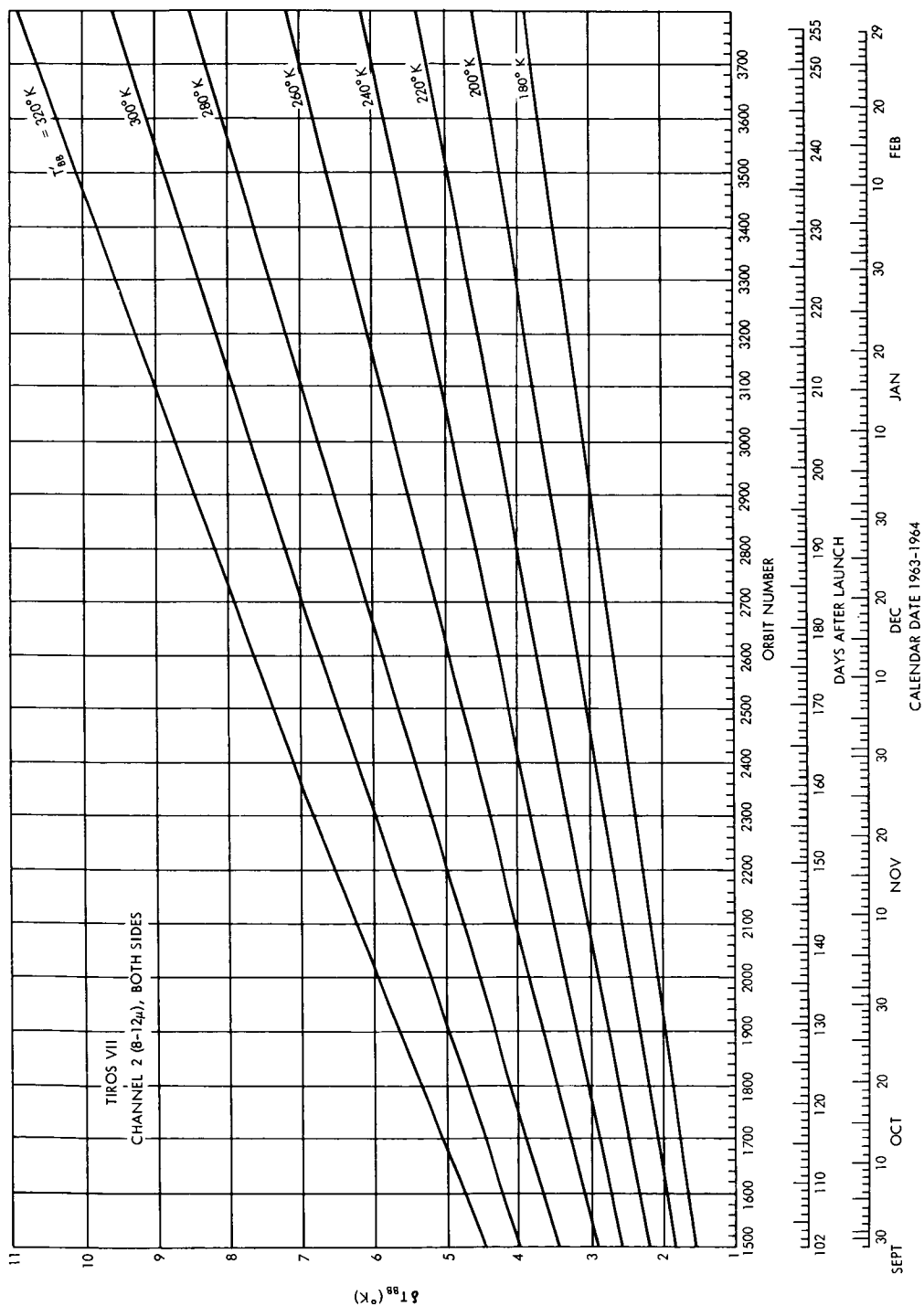


Figure 78—Temperature corrections δT_{nn} , vs. orbit number, channel 2, both sides.
An equivalent blackbody temperature measurement T'_{nn} should be corrected by adding the δT_{nn} value corresponding to the appropriate orbit number.

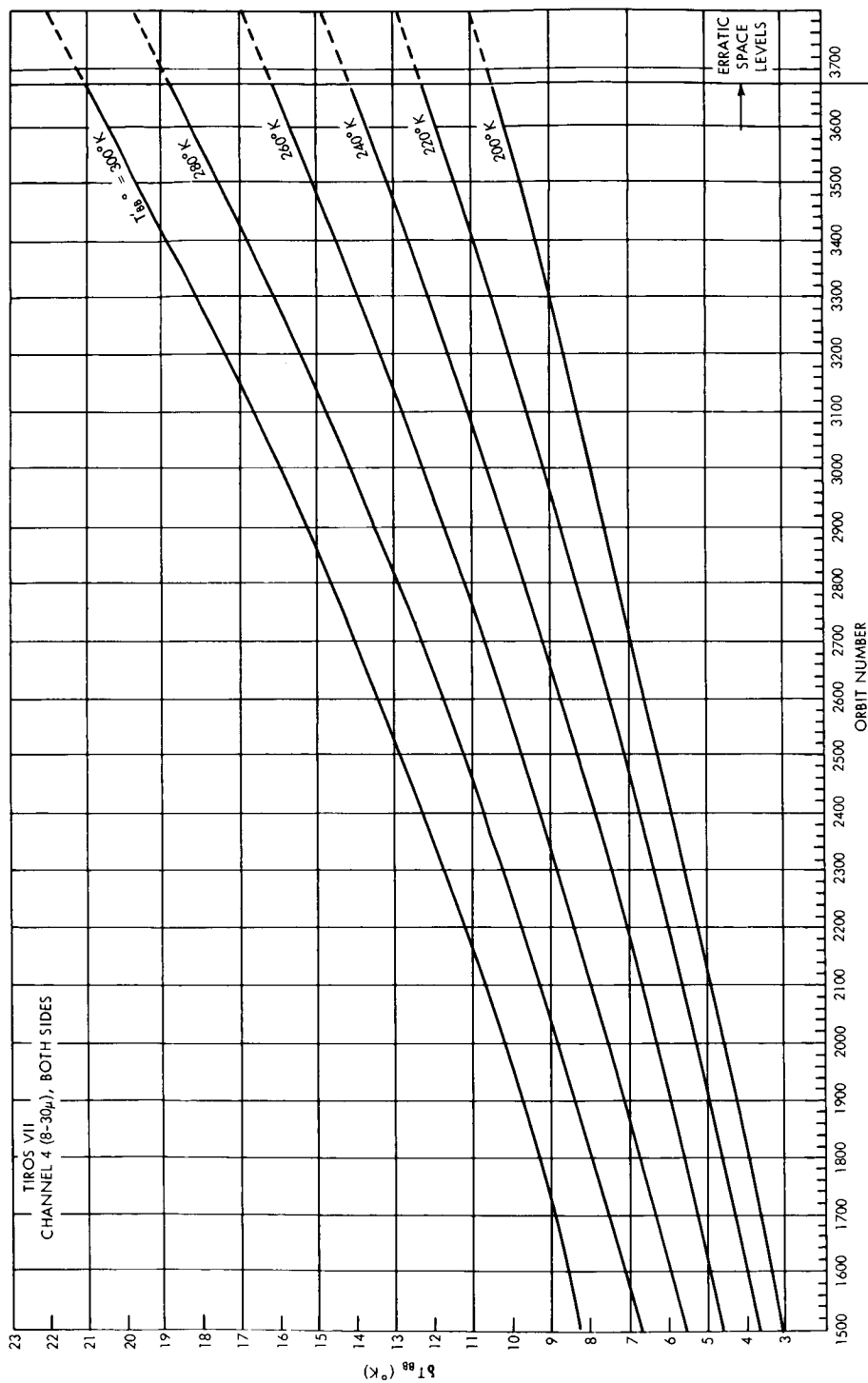


Figure 79—Temperature corrections δT_B vs. orbit number, channel 4, both sides. An equivalent blackbody temperature measurement T_{BB} should be corrected by adding the δT_B value corresponding to the appropriate orbit number.

(There is some evidence that, in addition to the nomogram corrections, after day 180, or orbit 2656, approximately 3.5°K should be subtracted from measurements made through the floor and added to measurements made through the wall of channel 4. During the onset period between orbits 2073 and 2656, this additional correction should be varied linearly from 0° to 3.5°K. After day 249, or orbit 3677, corrections are not considered valid because of erratic behavior.)

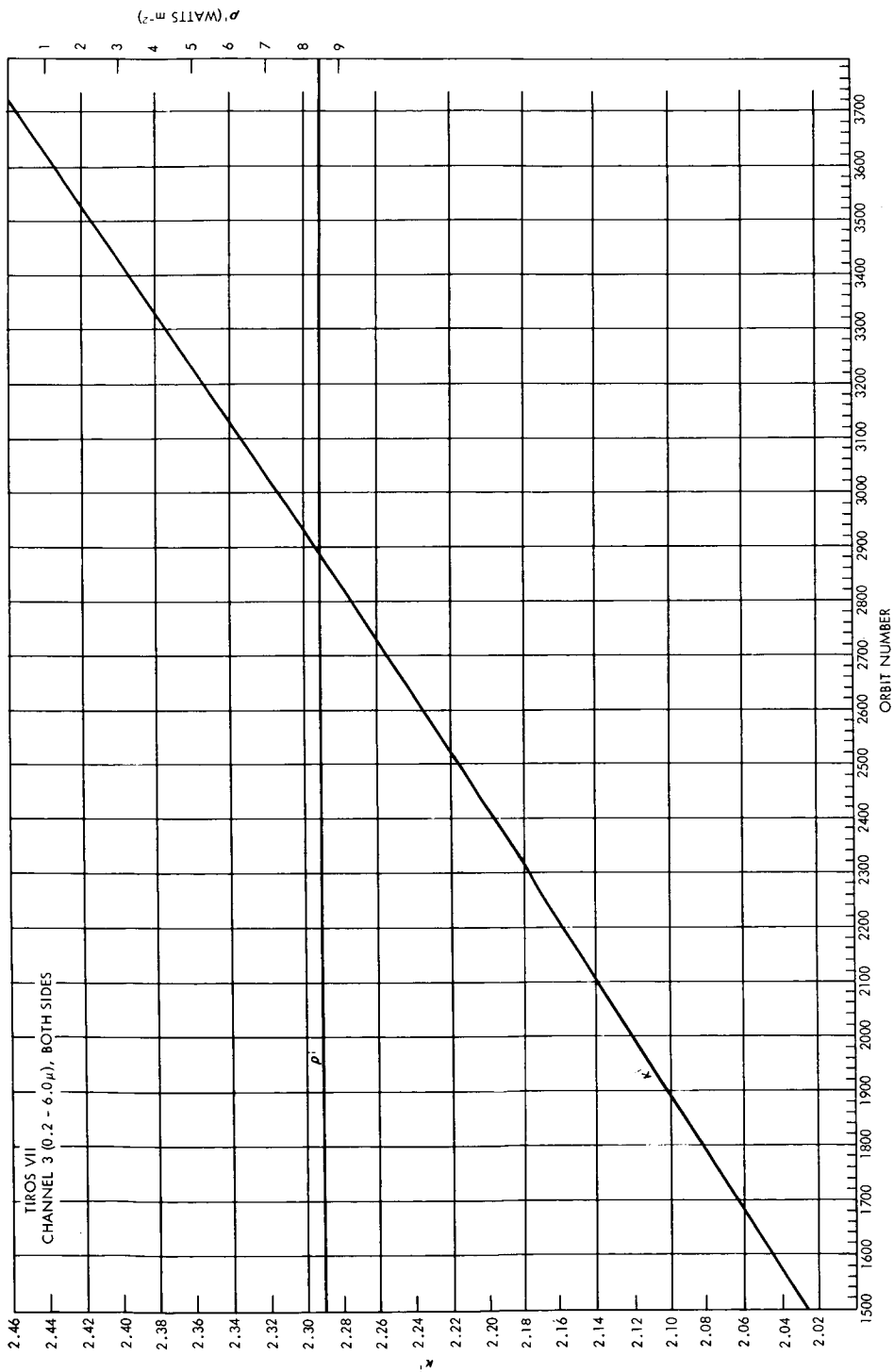


Figure 80—Normalizing parameters κ' and ρ' for channel 3. A measurement \bar{W}' should be corrected to yield \bar{W} by means of the equation $\bar{W} = \kappa' (\bar{W}' + \rho')$.

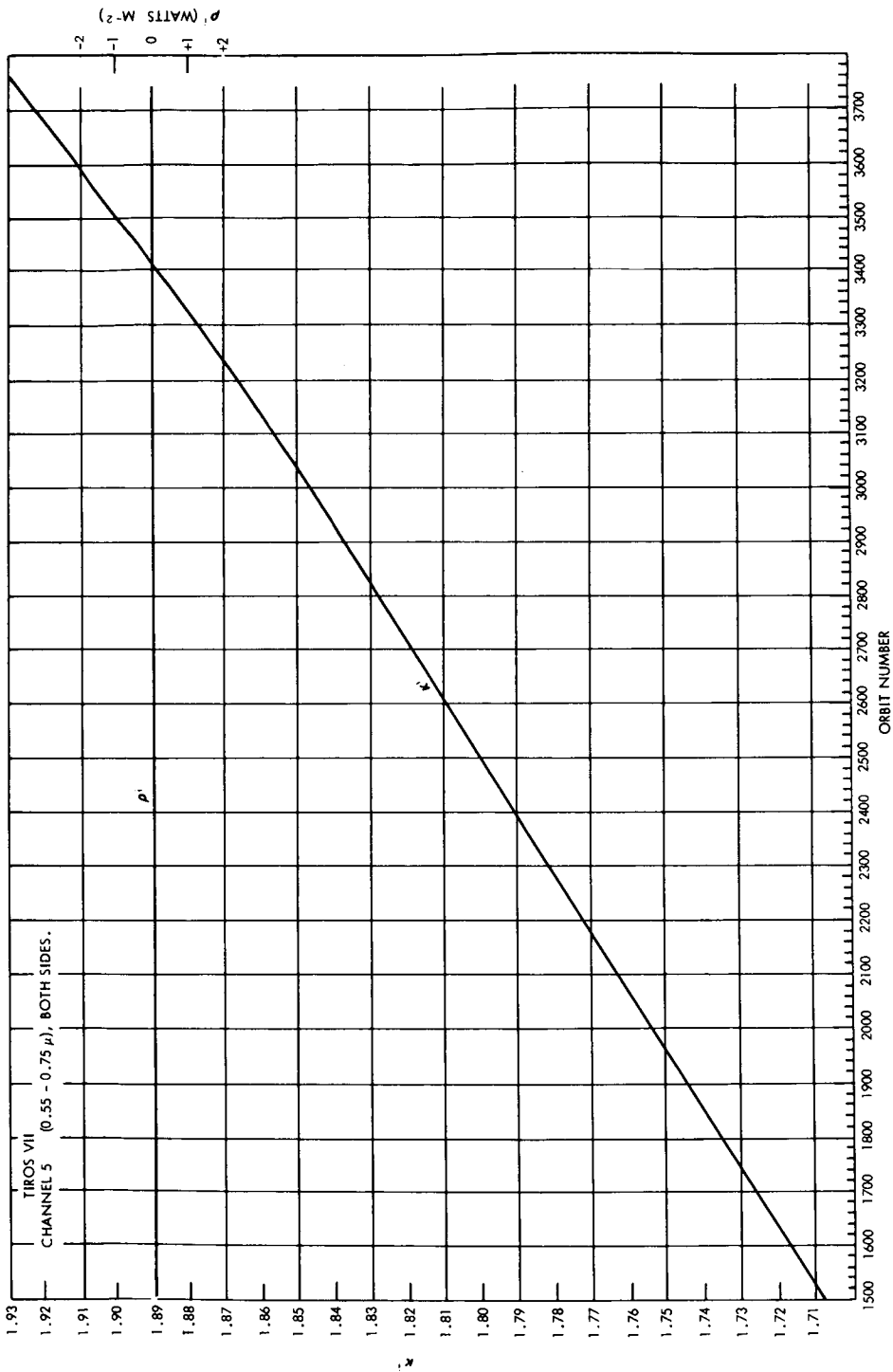


Figure 81—Normalizing parameters κ' and ρ' for channel 5. A measurement \bar{W}' should be corrected to yield \bar{W} by means of the equation $\bar{W} = \kappa' (\bar{W}' + \rho')$.

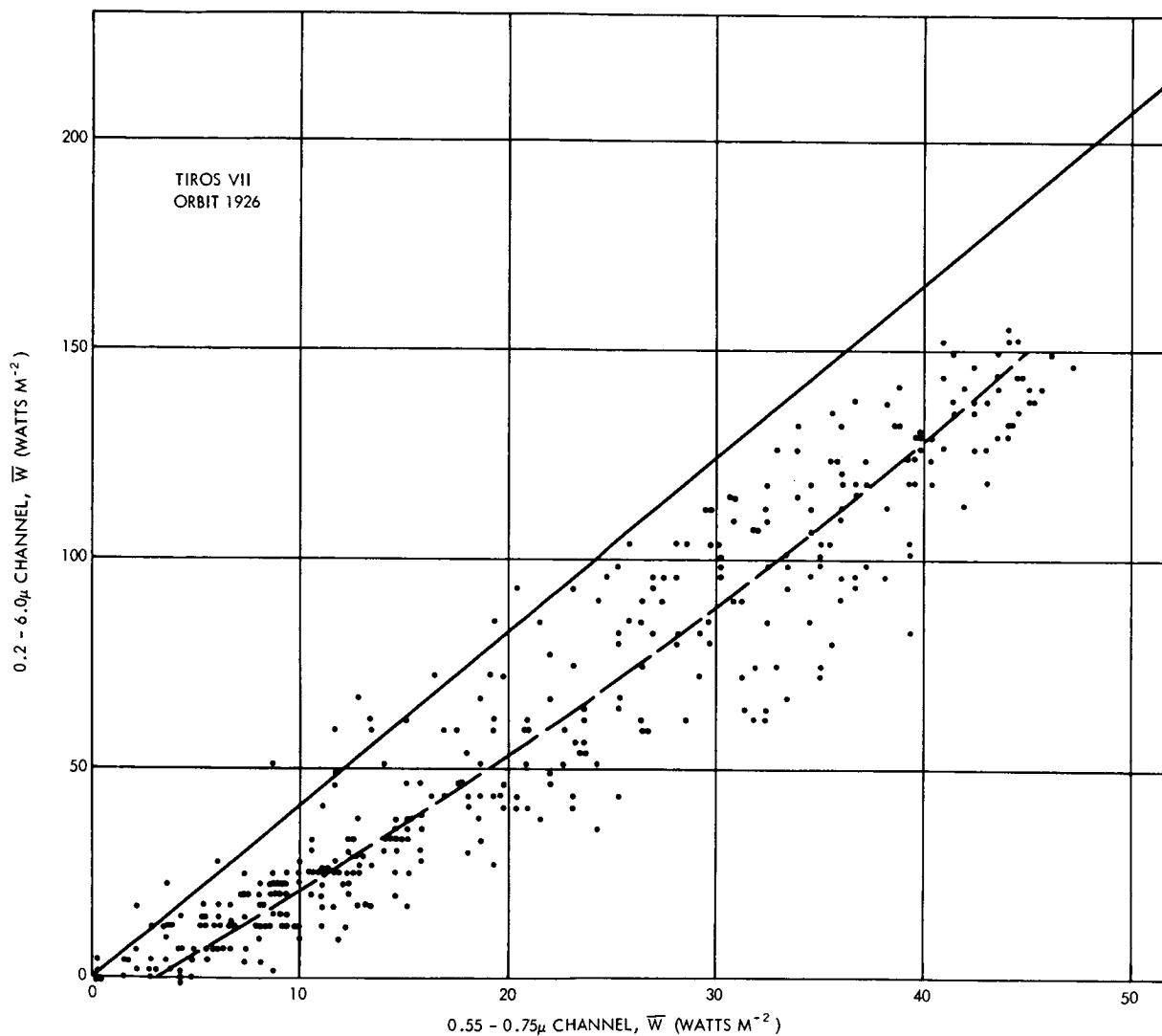


Figure 82—Scatter diagram of effective radiant emittance measurements from channels 3 (ordinate) and 5 (abscissa) of TIROS VII, illustrating the effects of a shift in the oscillator transfer function. The data shown are not normalized and are from 16 swaths over hurricane Ginny and adjacent ocean areas, orbit 1926, 27 October 1963. The solid line is the locus of equal fractional parts of the effective solar constant, \bar{W}^* for each channel. The dashed line intersects the ordinate at approximately $(-\rho') \sim (-8.5)$ watts/m². There is also slight evidence of a rotation of the oscillator transfer function and/or relatively greater symmetrical optical degradation in channel 3 than in channel 5.

APPENDIX A
INDEX OF FINAL METEOROLOGICAL
RADIATION TAPES

One hundred forty-seven tapes, containing data from 762 individual orbits of TIROS VII from October 1, 1963 to February 29,

1964 are tabulated on the following pages. The FMR tapes from this period are numbered from 438 to 584. The nomenclature used in the Index and an example illustrating the use of the Index is given in Appendix A, Volume 1.

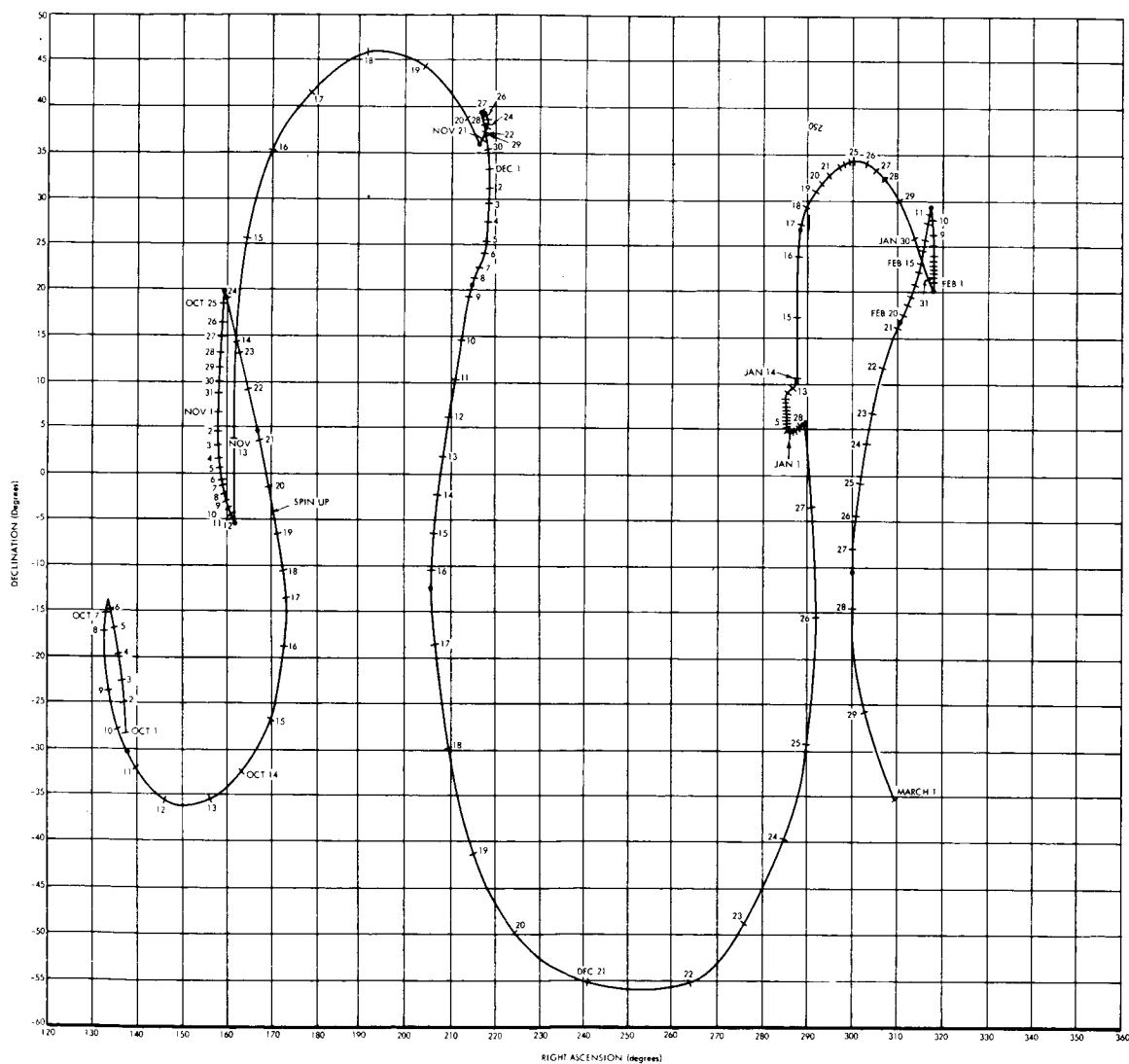


Figure A1—Observed motion of the TIROS VII spin vector on the celestial sphere.
Each subdivision represents one day. Positions at 12 GMT each day are indicated.

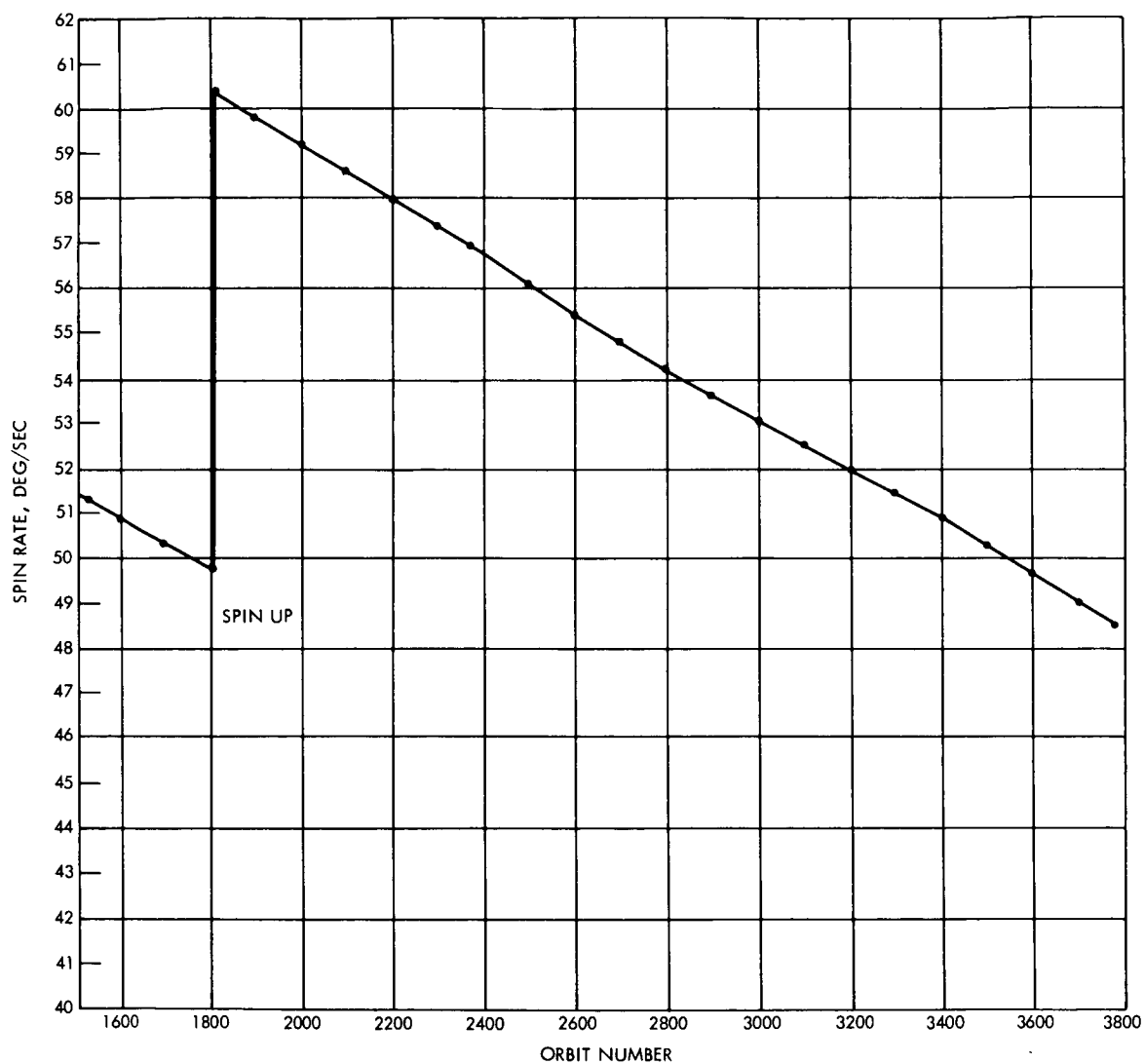


Figure A2—Time history of the TIROS VII spin rate.

ORBIT NO.	COA STA	REACOUT					ORBIT					TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.	
		SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT (ANO)	SPIN		VECTOR		ATTITUDE		BEGIN	E N D		DROPOUTS, MINUTES W/R/T AND		
		EARTH LCNGI -TUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY		DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER ANO)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T AND		HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND			
1532	1	-96.64	0*57*51	10/ 1/63	104		-29.7	137.2	-6.3	59.6	51.305		-84.0	1* 9*12	11.4		438	
1533	1	-121.31	2*35*16	10/ 1/63	104		-29.5	137.2	-6.6	59.6	51.300		-75.3	2*49* 3	13.8		438	
1534	2	-145.98	4*12*40	10/ 1/63	104		-29.3	137.2	-6.9	59.6	51.294		-72.7	4*22* 3	9.4		438	
1536	3	164.66	7*27*30	10/ 1/63	104		-29.0	137.3	-7.5	59.7	51.283		-63.5	7*46* 3	18.6		438	
1537	3	139.99	9* 4*54	10/ 1/63	104		-28.8	137.3	-7.7	59.7	51.278		-21.5	9*26* 3	21.2		438	
1538	3	115.31	10*42*19	10/ 1/63	104		-28.7	137.3	-8.0	59.7	51.272		19.7	11* 7* 3	24.7		438	
1539	2	90.64	12*19*43	10/ 1/63	104		-28.4	137.2	-8.3	59.7	51.266		-57.2	12*55* 3	35.3		438	
1546	1	-82.66	23*41*35	10/ 1/63	104		-27.0	136.8	-10.2	59.6	51.228		-87.2	23*51* 3	9.5		439	
1547	1	-106.73	1*19* 0	10/ 2/63	105		-26.8	136.8	-10.5	59.6	51.222		-76.5	1*31* 3	12.1		439	
1548	2	-131.40	2*56*24	10/ 2/63	105		-26.6	136.8	-10.8	59.7	51.217		-74.3	3* 4* 3	7.7		439	
1549	2	-156.08	4*33*49	10/ 2/63	105		-26.4	136.8	-11.1	59.7	51.211		-77.1	4*45* 3	11.2		439	
1551	3	154.57	7*48*38	10/ 2/63	105		-26.1	136.9	-11.7	59.7	51.201		-62.2	8* 8* 3	19.4		439	
1552	3	129.89	9*26* 2	10/ 2/63	105		-25.9	136.9	-12.0	59.8	51.195		-66.7	9*48* 3	22.0		439	
1553	2	105.22	11* 3*27	10/ 2/63	105		-25.7	136.9	-12.3	59.8	51.190		-64.8	11*38* 3	34.6		439	
1554	2	80.54	12*40*51	10/ 2/63	105		-25.4	136.8	-12.6	59.7	51.184		-51.3	13*18* 3	37.2		439	
1561	1	-92.16	0* 2*43	10/ 3/63	106		-23.9	136.4	-14.5	59.7	51.146		-85.3	0*12* 3	9.3		440	
1562	1	-116.83	1*40* 8	10/ 3/63	106		-23.7	136.4	-14.8	59.7	51.151		-76.7	1*53* 3	12.9		440	
1563	2	-141.50	3*17*32	10/ 3/63	106		-23.6	136.5	-15.1	59.7	51.145		-71.2	3*26* 3	8.5		440	
1567	3	119.79	9*47*11	10/ 3/63	106		-22.8	136.5	-16.3	59.7	51.121		-53.5	10*11* 3	23.9		440	
1568	2	95.12	11*24*35	10/ 3/63	106		-22.6	136.5	-16.6	59.7	51.115		-62.1	12* 3* 3	38.5		440	
1576	1	-102.25	0*23*51	10/ 4/63	107		-20.9	136.0	-18.9	59.7	51.069		-69.5	0*34* 3	10.2		441	
1578	2	-151.60	3*38*40	10/ 4/63	107		-20.5	136.1	-19.5	59.7	51.057		-60.6	3*52*28	13.8		441	
1580	1	159.04	6*53*30	10/ 4/63	107		-20.1	136.1	-20.1	59.8	51.045		-59.9	7*25* 3	31.6		441	
1581	1	134.37	8*30*54	10/ 4/63	107		-19.9	136.1	-20.5	59.8	51.040		-53.8	9* 6* 3	35.2		441	
1582	2	109.70	10* 8*19	10/ 4/63	107		-19.7	136.1	-20.8	59.8	51.034		-51.4	10*43* 3	34.7		441	
1591	1	-112.35	0*44*59	10/ 5/63	108		-17.7	135.7	-23.5	59.8	50.982		-78.4	0*57* 3	12.1		442	

ORBIT NO.	COA STA	REACOUT										ORBIT										TIME INTERVAL OF FILE ON FMR TAPE										FMR TAPE REEL NO.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		SATELLITE ORBITAL					EQUATOR CROSSING AT					SPIN VECTOR					ATTITUDE					BEGIN					END						DROPOUTS, MINUTES W/R/T AND																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
		EARTH LCNGI (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	ASCENDING NODE (AVO)	DECLI -NATION (DEG)	RIGHT ASCENSION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND	E N D	FROM-	TO-																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

ORBIT NO.	CDA STA	REACOUT										ORBIT										TIME INTERVAL OF FILE ON FMR TAPE										FMR TAPE REEL NO.					
		SATELLITE ORBITAL					EQUATOR CROSSING AT					SPIN VECTOR					ATTITUDE					BEGIN					E N D						DROPOUTS, MINUTES W/R/T AND				
		EARTH LONGITUDE (DEG)		ASCENDING NODE (ANO)			CALENDAR DATE		TIROS DAY			DECLINATION (DEG)		RIGHT ASCENSION (DEG)			MINI-MUM NADIR (DEG)		TOT (MIN. AFTER AND)			SPIN RATE (DEG /SEC)		MINUTES W/R/T AND		HOURS MINUTES SECONDS (GMT)			MINUTES W/R/T AND		FROM- TO-						
1655	2		108.55	8*39*10	10/ 9/63	112																											446				
1664	1		-113.50	23*15*50	10/ 9/63	112																											447				
1665	2		-100.17	C*53*15	10/10/63	113																											447				
1667	3		172.47	4* 8* 4	10/10/63	113																											447				
1668	1		147.80	5*45*28	10/10/63	113																											447				
1669	1		123.13	7*22*53	10/10/63	113																											447				
1670	2		98.45	5* 0*18	10/10/63	113																											447				
1678	1		-98.92	21*59*34	10/10/63	113																											448				
1679	1		-123.59	23*36*58	10/10/63	113																											448				
1680	2		-148.27	1*14*23	10/11/63	114																											448				
1682	1		162.38	4*29*12	10/11/63	114																											448				
1684	2		113.03	7*44* 1	10/11/63	114																											448				
1693	1		-109.01	22*20*42	10/11/63	114																											449				
1694	2		-133.69	23*58* 6	10/11/63	114																											449				
1695	2		-158.36	1*35*31	10/12/63	115																											449				
1698	1		127.61	6*27*44	10/12/63	115																											449				
1699	2		102.93	8* 5* 9	10/12/63	115																											449				
1700	2		78.26	9*42*33	10/12/63	115																											449				
1707	1		-94.44	21* 4*25	10/12/63	115																											450				
1708	1		-119.11	22*41*49	10/12/63	115																											450				
1709	2		-143.78	C*19*14	10/13/63	116																											450				
1711	3		166.86	3*34* 3	10/13/63	116																											450				
1712	1		142.19	5*11*27	10/13/63	116																											450				
1714	2		92.84	8*26*16	10/13/63	116																											450				
1728	3		107.42	7*10* 0	10/14/63	117																											451				
1729	2		82.75	8*47*24	10/14/63	117																											451				

TIME INTERVAL OF FILE ON FMR TAPE										ORBIT										READOUT									
ORBIT NO.	COA	STA	SATELLITE ORBITAL DATA			EQUATOR CROSSING AT (AND)			SPIN VECTOR			ATTITUDE			BEGIN			E N D			DROPOUTS, MINUTES W/R/T AND		FMR TAPE REEL NO.						
			ORBITAL DATA	ASCENDING	NODE (AND)	TIROS	CALENDAR	DATE	DAY	DECLI	RIGHT ASCEN	MINI	TOT (MIN. AFTER)	SPIN RATE (DEG /SEC)	MINU	-TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU	-TES W/R/T AND	FROM-	TO-								
1736	1		-89.95	20*	9*16	10/14/63	117		-31.1	167.6	-23.2	78.5	50.191	-85.6	20*19*	3						452							
1737	1		-114.63	21*46*	40	10/14/63	117		-30.5	167.7	-23.5	78.7	50.186	-77.3	21*59*	3						452							
1738	2		-139.39	23*24*	5	10/14/63	117		-30.1	167.8	-23.9	78.9	50.181	-72.5	23*33*	3						452							
1739	2		-164.00	1*	1*29	10/15/63	118		-29.7	167.8	-24.2	79.0	50.175	-75.3	1*15*	3						452							
1740	3		171.31	2*38*	54	10/15/63	118		-29.4	167.8	-24.5	79.1	50.170	-73.2	2*57*	3						452							
1741	1		146.64	4*16*	18	10/15/63	118		-29.2	167.9	-24.7	79.2	50.165	-69.1	4*50*	3						452							
1742	3		121.97	5*53*	43	10/15/63	118		-29.0	168.1	-24.8	79.3	50.159	-53.9	6*17*	3						452							
1743	3		97.29	7*31*	7	10/15/63	118		-28.8	168.6	-24.8	79.5	50.154	-59.7	7*57*	3						452							
1751	1		-100.08	20*30*	24	10/15/63	118		-24.2	171.9	-26.2	81.4	50.112	-77.7	20*40*	3						453							
1752	1		-124.75	22*	7*48	10/15/63	118		-23.6	171.9	-26.7	81.6	50.106	-74.5	22*23*	3						453							
1753	2		-149.42	23*45*	13	10/15/63	118		-23.1	171.7	-27.1	81.7	50.101	-72.2	23*55*	3						453							
1755	1		161.22	3*	0*2	10/16/63	119		-22.3	171.4	-27.8	81.9	50.090	-65.1	3*31*	3						453							
1756	1		136.55	4*37*	26	10/16/63	119		-22.0	171.4	-28.1	82.0	50.085	-56.3	5*12*	3						453							
1757	3		111.87	6*14*	51	10/16/63	119		-21.7	171.6	-28.2	82.1	50.080	-53.2	6*40*	3						453							
1767	2		-134.85	22*28*	56	10/16/63	119		-15.4	173.4	-30.9	84.3	50.026	-79.2	22*37*	3						454							
1768	2		-159.52	C*	6*20	10/17/63	120		-15.2	173.3	-31.2	84.5	50.021	-78.8	0*18*	3						454							
1769	3		175.80	1*43*	45	10/17/63	120		-15.1	173.2	-31.3	84.5	50.016	-75.0	2*2*	3						454							
1771	3		126.45	4*58*	34	10/17/63	120		-14.8	173.0	-31.4	84.6	50.005	-57.4	5*21*	3						454							
1780	1		-95.60	19*35*	14	10/17/63	120		-12.5	173.1	-31.6	85.7	49.957	-76.7	19*45*	3						455							
1781	1		-120.27	21*12*	39	10/17/63	120		-12.3	173.0	-31.7	85.8	49.952	-76.2	21*26*	3						455							
1782	2		-144.94	22*50*	3	10/17/63	120		-12.1	172.8	-31.8	85.8	49.946	-73.9	23*0*	3						455							
1784	3		165.70	2*	4*52	10/18/63	121		-11.7	172.5	-32.0	85.9	49.936	-65.4	2*23*	3						455							
1785	3		141.02	3*42*	17	10/18/63	121		-11.6	172.4	-32.1	86.0	49.930	-68.6	4*4*	3						455							
1786	3		116.35	5*19*	41	10/18/63	121		-11.4	172.3	-32.1	86.0	49.925	-64.3	5*43*	3						455							
1794	1		-81.02	18*18*	57	10/18/63	121		-9.2	172.3	-32.3	86.9	49.882	-69.5	18*30*	34						456							
1795	1		-105.70	15*56*	22	10/18/63	121		-8.9	172.2	-32.4	87.0	49.877	-75.7	20*8*	3						456							

ORBIT NO.	CDA STA	REACOUT										ORBIT										TIME INTERVAL OF FILE ON FMR TAPE										FMR TAPE REEL NO.										
		SATELLITE ORBITAL					EQUATOR ASCENDING					CROSSING AT					SPIN VECTOR					ATTITUDE					BEGIN						E N D					DROPOUTS, MINUTES W/R/T AND				
		EARTH LCNGI -TUDE (DEG)		HOURS MINUTES SECONDS (GMT)		CALENDAR DATE		TIROS DAY		DECLI -NA -TION (DEG)		RIGHT ASCEN -SION (DEG)		MINI -MUM NADIR (DEG)		TOT (MIN. AFTER AND)		SPIN RATE (DEG /SEC)		MINU -TES W/R/T AND		HOURS MINUTES SECONDS (GMT)		MINU -TES W/R/T AND		FROM- TO-																
1796	2	-130.37	21*33*46	10/18/63	121					-8.7	172.0	-32.5	87.1	49.871	-74.7	21*42* 3	8.3														456											
1797	2	-155.04	23*11*11	10/18/63	121					-8.5	171.9	-32.6	87.2	49.866	-79.0	23*22* 3	10.9														456											
1799	3	155.60	2*26* 0	10/19/63	122					-8.1	171.5	-32.8	87.4	49.855	-64.5	2*45* 3	19.1														456											
1800	3	130.93	4* 3*24	10/19/63	122					-8.0	171.4	-32.9	87.4	49.850	-27.2	4*26* 3	22.7														456											
1801	2	106.26	5*40*49	10/19/63	122					-7.8	171.3	-32.9	87.5	49.845	-64.2	6*15* 3	34.2														456											
1810	1	-115.79	20*17*29	10/19/63	122					-5.2	171.0	-33.2	88.5	60.395	-20.5	20*31* 3	13.6														457											
1811	2	-140.46	21*54*54	10/19/63	122					-5.0	170.9	-33.3	88.6	60.396	-70.8	22* 4* 3	9.2														457											
1814	3	145.51	2*47* 7	10/20/63	123					-4.5	170.3	-33.5	88.8	60.396	-65.5	3* 8* 3	20.9														457											
1815	3	120.83	4*24*32	10/20/63	123					-4.3	170.2	-33.6	88.9	60.395	-66.5	4*48* 3	23.5														457											
1816	2	96.16	6* 1*56	10/20/63	123					-4.1	170.2	-33.6	89.0	60.394	-55.5	6*38* 3	36.1														457											
1824	1	-101.21	19* 1*12	10/20/63	123					-1.6	169.8	-33.9	89.9	60.371	-73.4	19*11* 3	9.9														458											
1825	2	-125.89	20*38*37	10/20/63	123					-1.3	169.6	-34.0	90.0	60.367	-73.8	20*46*33	7.9														458											
1826	2	-150.56	22*16* 1	10/20/63	123					-1.0	169.4	-34.2	90.1	60.362	-79.9	22*26* 3	10.0														458											
1828	3	160.09	1*30*50	10/21/63	124					-0.6	169.0	-34.4	90.3	60.352	-65.1	1*50* 3	19.2														458											
1829	1	135.41	3* 8*15	10/21/63	124					-0.4	168.9	-34.5	90.3	60.347	-68.0	3*43* 3	34.8														458											
1830	2	110.74	4*45*39	10/21/63	124					-0.3	168.8	-34.5	90.3	60.341	-52.5	5*19* 3	33.4														458											
1831	2	86.06	6*23* 4	10/21/63	124					0.	168.7	-34.5	90.4	60.335	-53.7	7* 0* 3	37.0														458											
1843	3	149.99	1*51*57	10/22/63	125					3.9	167.1	-35.7	91.7	60.254	-62.6	2*12* 3	20.1														459											
1855	2	-146.08	21*20*51	10/22/63	125					8.7	165.4	-37.3	93.3	60.166	-72.7	21*30* 3	9.2														460											
1857	3	164.57	C*35*40	10/23/63	126					9.3	164.8	-37.8	93.5	60.153	-66.0	0*54* 3	18.4														460											
1858	3	139.89	2*13* 5	10/23/63	126					9.6	164.5	-37.9	93.6	60.146	-68.8	2*34* 3	21.0														460											
1859	3	115.22	3*50*29	10/23/63	126					9.9	164.3	-38.1	93.7	60.140	-66.0	4*15*27	25.0														460											
1860	2	90.55	5*27*54	10/23/63	126					10.2	164.2	-38.2	93.8	60.133	-61.5	6* 3* 3	35.2														460											
1867	1	-82.15	16*49*45	10/23/63	126					13.4	163.3	-39.0	94.8	60.095	-88.1	16*58* 3	8.3														461											
1868	1	-106.83	18*27* 9	10/23/63	126					13.8	163.0	-39.2	95.0	60.090	-77.7	18*39* 3	11.9														461											
1869	2	-131.50	20* 4*34	10/23/63	126					14.2	162.7	-39.4	95.1	60.086	-74.9	20*12* 3	7.5														461											

ORBIT NO.	CDA STA	REACOUT				ORBIT				TIME INTERVAL OF FILE ON FMR TAPE						FMR TAPE REEL NO.		
		SATELLITE ORBITAL		EQUATOR CROSSING AT		SPIN	VECTOR	ATTITUDE		BEGIN	E N D		DROPOUTS, MINUTES W/R/T AND					
		EARTH LONGI- TUDE (DEG)	ASCENDING NODE (AND)	CALENDAR DATE	TIROS DAY			DECLI -NATION (DEG)	RIGHT ASCEN- SION (DEG)		MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)		MINU -TES W/R/T AND	TO-
1872	3	154.47	C*56*47	10/24/63	127	15.1	161.8	-40.1	95.4	60.075	-17.1	1*16*3	19.3			461		
1873	3	129.80	2*34*12	10/24/63	127	15.4	161.5	-40.3	95.5	60.072	-67.7	2*57*3	22.9			461		
1874	2	105.12	4*11*36	10/24/63	127	15.7	161.3	-40.4	95.6	60.032	-49.8	4*46*3	34.5			461		
1875	2	80.45	5*49*1	10/24/63	127	16.1	161.1	-40.5	95.7	60.026	-52.9	6*26*3	37.0			461		
1883	1	-116.92	18*48*17	10/24/63	127	19.4	159.9	-41.6	96.9	59.977	-81.1	19*1*3	12.8			462		
1884	2	-141.59	20*25*41	10/24/63	127	19.3	159.9	-41.4	97.0	59.971	-74.5	20*36*3	10.4			462		
1887	3	144.38	1*17*54	10/25/63	128	19.1	159.8	-40.8	97.1	59.952	-52.4	1*38*3	20.2			462		
1888	3	119.71	2*55*19	10/25/63	128	19.0	159.8	-40.6	97.1	59.946	-66.8	3*19*27	24.1			462		
1889	2	95.03	4*32*43	10/25/63	128	18.9	159.8	-40.3	97.1	59.940	-61.4	5*8*3	35.3			462		
1897	1	-102.34	17*31*59	10/25/63	128	17.8	159.6	-38.2	97.0	59.890	-73.4	17*42*33	10.6			463		
1898	2	-127.01	19*9*24	10/25/63	128	17.6	159.6	-37.9	97.0	59.883	-73.5	19*16*3	6.7			463		
1899	2	-151.68	20*46*48	10/25/63	128	17.5	159.6	-37.7	97.0	59.877	-79.6	20*59*3	12.3			463		
1901	3	158.96	C*1*37	10/26/63	129	17.3	159.6	-37.1	97.0	59.864	-62.7	0*20*3	18.4			463		
1902	3	134.29	1*39*1	10/26/63	129	17.2	159.6	-36.8	97.0	59.858	-68.3	2*1*3	22.0			463		
1903	3	109.61	3*16*26	10/26/63	129	17.1	159.6	-36.6	97.0	59.851	-65.3	3*41*3	24.6			463		
1904	2	84.94	4*53*50	10/26/63	129	16.9	159.6	-36.3	97.0	59.845	-61.1	5*31*3	37.2			463		
1911	1	-87.76	16*15*42	10/26/63	129	15.9	159.4	-34.5	96.9	59.800	-87.1	16*25*33	9.9			464		
1912	1	-112.44	17*53*6	10/26/63	129	15.8	159.4	-34.2	96.9	59.793	-77.5	18*6*33	13.5			464		
1913	2	-137.11	19*30*31	10/26/63	129	15.7	159.4	-33.9	96.9	59.787	-73.4	19*39*3	8.5			464		
1914	2	-161.78	21*7*55	10/26/63	129	15.5	159.4	-33.7	97.0	59.781	-78.1	21*21*3	13.1			464		
1916	3	148.87	0*22*44	10/27/63	130	15.3	159.4	-33.1	97.0	59.768	-62.4	0*43*3	20.3			464		
1917	3	124.19	2*0*9	10/27/63	130	15.2	159.4	-32.9	97.0	59.761	-66.6	2*23*3	22.9			464		
1918	2	99.52	3*37*33	10/27/63	130	15.1	159.4	-32.6	96.9	59.755	-62.2	4*14*3	36.5			464		
1926	1	-97.85	16*36*49	10/27/63	130	13.9	159.2	-30.5	96.9	59.703	-75.3	16*49*33	12.7			465		
1927	1	-122.53	18*14*13	10/27/63	130	13.8	159.2	-30.2	96.9	59.696	-73.8	18*28*3	13.8			465		
1928	2	-147.20	19*51*38	10/27/63	130	13.7	159.2	-29.9	96.9	59.690	-8.2	20*3*3	11.4			465		

REACOUT										ORBIT				TIME INTERVAL OF FILE ON FMR TAPE						FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT NODE (ANO)		SPIN		VECTOR		ATTITUDE		BEGIN		E N O		DROPOUTS, MINUTES W/R/T AND		
		EARTH LONGI- TUDE (DEG)	MINUTES (GMT)	HOURS SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI- NA- TION (DEG)	RIGHT ASCEN- SION (DEG)	MINI- MUM NADIR (DEG)	TOT (MIN. AFTER ANO)	SPIN RATE (DEG /SEC)	MINU- TES W/R/T ANO	HOURS MINUTES SECONDS (GMT)	MINU- TES W/R/T ANO	FROM-	TO-				
1930	3	163.44	23* 6*27		10/27/63	130	13.4	159.2	-29.4	97.0	59.677	-63.8	23*26*13	19.8				465		
1931	3	138.77	C*43*51		10/28/63	131	13.3	159.2	-29.1	96.9	59.670	-67.2	1* 5* 3	21.2				465		
1932	3	114.10	2*21*16		10/28/63	131	13.2	159.2	-28.8	96.9	59.664	-65.8	2*45*11	24.1				465		
1933	2	89.42	3*58*40		10/28/63	131	13.1	159.2	-28.6	96.9	59.657	-61.2	4*35* 3	36.4				465		
1940	1	-83.28	15*20*31		10/28/63	131	12.1	159.0	-26.8	96.9	59.612	-87.6	15*30*27	9.9				466		
1941	1	-107.95	16*57*56		10/28/63	131	11.9	159.0	-26.5	96.9	59.605	-78.0	17*10* 3	12.1				466		
1942	2	-132.62	18*35*20		10/28/63	131	11.8	159.0	-26.2	96.9	59.599	-73.5	18*44*27	9.1				466		
1943	2	-157.30	20*12*45		10/28/63	131	11.7	159.0	-25.9	96.8	59.592	-77.8	20*25* 3	12.3				466		
1945	3	153.35	23*27*34		10/28/63	131	11.5	159.0	-25.4	96.9	59.579	-20.2	23*47* 3	19.5				466		
1946	3	128.65	1* 4*58		10/29/63	132	11.4	159.0	-25.1	96.9	59.573	-67.6	1*27* 3	22.1				466		
1947	2	103.98	2*42*23		10/29/63	132	11.3	158.9	-24.8	96.9	59.567	-62.7	3*17* 3	34.7				466		
1955	1	-93.39	15*41*38		10/29/63	132	10.2	158.7	-22.8	97.0	59.515	-75.3	15*52* 3	10.4				467		
1956	1	-118.06	17*19* 3		10/29/63	132	10.0	158.7	-22.5	96.9	59.509	-75.9	17*34* 3	15.0				467		
1957	2	-142.74	18*56*27		10/29/63	132	9.9	158.7	-22.1	96.9	59.503	-71.6	19* 7* 3	10.6				467		
1959	3	167.91	22*11*16		10/29/63	132	9.7	158.7	-21.7	96.9	59.490	-61.8	22*29* 3	17.8				467		
1960	3	143.24	23*48*41		10/29/63	132	9.6	158.7	-21.4	96.9	59.484	13.5	0* 9* 3	20.4				467		
1961	3	118.56	1*26* 5		10/30/63	133	9.5	158.7	-21.1	96.9	59.477	-66.9	1*50* 3	24.0				467		
1962	2	93.89	3* 3*30		10/30/63	133	9.4	158.7	-20.9	97.0	59.471	-57.3	3*38*58	35.5				467		
1970	1	-103.48	16* 2*45		10/30/63	133	8.3	158.5	-18.8	96.9	59.421	-74.0	16*15* 3	12.3				466		
1971	2	-128.16	17*40*10		10/30/63	133	8.2	158.5	-18.5	96.9	59.415	-74.0	17*49* 3	8.9				468		
1972	2	-152.83	19*17*34		10/30/63	133	8.1	158.5	-18.3	97.0	59.409	-77.4	19*29* 3	11.5				468		
1974	3	157.82	22*32*23		10/30/63	133	7.9	158.5	-17.7	97.0	59.397	-61.9	22*51* 3	18.7				468		
1975	3	133.14	C* 9*48		10/31/63	134	7.8	158.5	-17.5	97.0	59.390	6.7	0*32* 3	22.3				468		
1976	2	108.47	1*47*12		10/31/63	134	7.7	158.5	-17.2	97.0	59.384	-64.3	2*21* 3	33.9				468		
1977	2	83.80	3*24*37		10/31/63	134	7.6	158.4	-16.9	97.0	59.378	-52.0	4* 2* 3	37.4				468		
1991	2	98.38	2* 8*19		11/ 1/63	135	6.0	158.2	-13.2	97.1	59.295	-69.8	2*44* 3	35.7				469		

TIME INTERVAL OF FILE ON FMR TAPE																
ORBIT																
READOUT																
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT		SPIN VECTOR		ATTITUDE		BEGIN	E N D		DROPOUTS, MINUTES W/R/T AND	FMR TAPE REEL NO.
		LCNGL -TIDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -NUM -NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T AND		HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND		
2006	2	88.29	2*29*26	11/ 2/63	136	4.3	158.1	-9.3	97.3	59.213	-67.1	3* 7* 3	37.6			470
2013	1	-84.41	13*51*17	11/ 2/63	136	3.5	157.9	-7.5	97.3	59.175	-87.4	14* 0*33	9.3			471
2014	1	-109.09	15*28*41	11/ 2/63	136	3.4	157.9	-7.2	97.3	59.170	-76.0	15*41* 3	12.4			471
2015	2	-133.76	17* 6* 6	11/ 2/63	136	3.3	157.9	-7.0	97.3	59.164	-72.4	17*15* 3	9.0			471
2018	3	152.21	21*58*19	11/ 2/63	136	3.1	158.0	-6.1	97.4	59.147	-54.1	22*19* 3	20.7			471
2019	3	127.54	23*35*44	11/ 2/63	136	3.0	158.0	-5.9	97.4	59.141	-64.7	23*59* 3	23.3			471
2020	2	102.87	1*13* 8	11/ 3/63	137	2.9	158.0	-5.8	97.4	59.135	-61.5	1*48* 3	34.9			471
2021	2	78.20	2*50*33	11/ 3/63	137	2.8	157.9	-5.6	97.4	59.129	-50.2	3*29* 3	38.5			471
2028	1	-94.51	14*12*24	11/ 3/63	137	2.1	157.9	-3.8	0.1	59.088	2.0	14*22*33	10.2			472
2029	1	-119.18	15*49*48	11/ 3/63	137	2.0	157.9	-3.5	0.1	59.082	-74.7	16* 4*33	14.8			472
2030	2	-143.85	17*27*13	11/ 3/63	137	1.9	157.9	-3.2	0.1	59.076	-71.2	17*37* 3	9.8			472
2032	3	166.79	20*42* 1	11/ 3/63	137	1.8	157.9	-2.7	0.2	59.063	-63.5	21* 1* 3	19.0			472
2033	3	142.12	22*19*26	11/ 3/63	137	1.7	157.9	-2.4	0.2	59.057	-66.1	22*40*33	21.1			472
2034	3	117.45	23*56*50	11/ 3/63	137	1.7	157.9	-2.2	0.2	59.051	-12.8	0*21* 3	24.2			472
2035	2	92.77	1*34*15	11/ 4/63	138	1.6	157.9	-1.9	0.2	59.045	-58.7	2*10* 3	35.8			472
2043	1	-104.60	14*33*31	11/ 4/63	138	0.8	157.9	0.2	0.3	58.995	-72.8	14*45* 3	11.5			473
2044	2	-129.27	16*10*55	11/ 4/63	138	0.7	157.9	0.5	0.4	58.988	-73.4	16*19*33	8.6			473
2045	2	-153.94	17*48*20	11/ 4/63	138	0.7	157.9	0.7	0.4	58.982	-76.1	18* 0*33	12.2			473
2047	3	156.70	21* 3* 8	11/ 4/63	138	0.6	158.0	1.3	0.5	58.969	-61.1	21*22*33	19.4			473
2048	3	132.03	22*40*33	11/ 4/63	138	0.5	158.0	1.5	0.4	58.963	-65.7	23* 3* 3	22.5			473
2049	2	107.35	0*17*57	11/ 5/63	139	0.4	158.0	1.8	0.4	58.956	-62.5	0*52* 3	34.1			473
2050	2	82.68	1*55*22	11/ 5/63	139	0.4	158.0	2.0	0.5	58.950	-50.8	2*33* 3	37.7			473
2073	2	-124.78	15*15*44	11/ 6/63	140	-1.2	158.3	8.1	1.0	58.801	-77.2	15*24*33	8.8			474
2074	2	-149.45	16*53* 9	11/ 6/63	140	-1.3	158.3	8.4	1.1	58.795	-83.1	17* 5* 3	11.9			474
2076	3	161.19	20* 7*57	11/ 6/63	140	-1.4	158.4	8.9	1.0	58.782	-84.8	20*28* 3	20.1			474
2077	3	136.52	21*45*22	11/ 6/63	140	-1.4	158.5	9.2	1.1	58.775	-72.6	22* 8* 3	22.7			474

READOUT														ORBIT				TIME INTERVAL OF FILE ON FMR TAPE										FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT NODE (ANO)		SPIN		VECTOR		ATTITUDE		BEGIN MINU -TES W/R/T ANO	E N D		DROPOUTS, MINUTES W/R/T AND											
		EARTH LCNG -TUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER ANO)	SPIN RATE (DEG /SEC)	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T ANO	FROM-		TO-													
2078	2	111.85	23*22*46	11/ 6/63	140	-1.4	158.5	9.4	1.1	58.769	-69.5	23*57* 3	34.3					474										
2079	2	87.17	1* 0*11	11/ 7/63	141	-1.5	158.5	9.7	1.2	58.763	-58.0	1*38* 3	37.9					474										
2086	1	-85.53	12*22* 2	11/ 7/63	141	-1.9	158.6	11.5	1.4	58.719	-95.2	12*32* 3	10.0					475										
2089	2	-159.54	17*14*15	11/ 7/63	141	-2.0	158.7	12.3	1.4	58.700	-92.6	17*27* 3	12.8					475										
2090	3	175.77	18*51*40	11/ 7/63	141	-2.1	158.8	12.6	1.4	58.694	-78.4	19*10* 3	18.4					475										
2091	3	151.10	20*29* 4	11/ 7/63	141	-2.1	158.8	12.9	1.5	58.688	-73.1	20*49* 3	20.0					475										
2092	3	126.43	22* 6*29	11/ 7/63	141	-2.2	158.8	13.1	1.5	58.682	-72.4	22*29* 3	22.6					475										
2093	2	101.76	23*43*53	11/ 7/63	141	-2.2	158.9	13.4	1.6	58.675	-68.9	0*19*58	36.1					475										
2094	2	77.08	1*21*17	11/ 8/63	142	-2.3	158.9	13.7	1.6	58.669	-56.5	2* 0*33	39.3					475										
2103	2	-144.96	15*57*57	11/ 8/63	142	-2.7	159.1	16.0	1.9	58.616	-91.7	16*11* 3	13.1					476										
2105	3	165.68	19*12*46	11/ 8/63	142	-2.7	159.2	16.5	1.9	58.605	-85.6	19*32* 3	19.3					476										
2106	3	141.01	20*50*11	11/ 8/63	142	-2.7	159.3	16.8	2.0	58.599	-72.9	21*12* 3	21.9					476										
2107	3	116.34	22*27*35	11/ 8/63	142	-2.8	159.3	17.1	2.0	58.593	-70.5	22*52* 3	24.5					476										
2108	2	91.67	0* 5* 0	11/ 9/63	143	-2.8	159.3	17.3	2.1	58.588	-51.5	0*41* 3	36.1					476										
2116	1	-105.71	13* 4*15	11/ 9/63	143	-3.3	159.5	19.5	2.3	58.544	-92.3	13*17* 3	12.8					477										
2118	2	-155.05	16*19* 4	11/ 9/63	143	-3.3	159.7	20.0	2.4	58.534	-76.2	16*31* 3	12.0					477										
2120	3	155.59	19*33*53	11/ 9/63	143	-3.4	159.8	20.6	2.5	58.523	-85.1	19*53*33	19.7					477										
2121	3	130.92	21*11*17	11/ 9/63	143	-3.4	159.8	20.9	2.5	58.518	-72.6	21*33*33	22.3					477										
2132	2	-140.47	15* 2*46	11/10/63	144	-3.9	160.2	23.8	2.9	58.428	-77.9	15*13* 3	10.3					478										
2134	3	170.18	18*17*35	11/10/63	144	-4.0	160.4	24.4	3.0	58.417	-87.0	18*35*33	18.0					478										
2136	3	120.83	21*32*24	11/10/63	144	-4.0	160.5	24.9	3.1	58.406	-81.2	21*55*33	23.2					478										
2147	2	-150.56	15*23*53	11/11/63	145	-4.4	160.9	27.8	3.5	58.346	-93.9	15*35* 3	11.2					479										
2149	3	160.09	18*38*42	11/11/63	145	-4.5	161.1	28.4	3.6	58.335	-86.1	18*57* 3	18.4					479										
2151	3	110.74	21*53*31	11/11/63	145	-4.5	161.2	28.9	3.7	58.324	-79.8	22*18*33	25.0					479										
2163	3	174.65	17*22*24	11/12/63	146	-4.8	161.8	32.1	4.3	58.260	-87.1	17*40* 3	17.7					480										
2164	3	149.97	18*59*48	11/12/63	146	-4.8	161.9	32.4	4.4	58.254	-74.1	19*19*58	20.2					480										

ORBIT NO.	COA STA	REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE							FMR TAPE REEL NO.
		SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT NOCE (AND)		SPIN		VECTOR		ATTITUDE		BEGIN	E N D			DROPOUTS, MINUTES W/R/T AND						
		EARTH LONGI -TIDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND											
2166	3	100.63	22*14*37	11/12/63	146	-3.2	161.7	32.4	4.6	58.243	-79.2	22*40*33	25.9					480						
2176	2	-146.09	14*28*42	11/13/63	147	4.7	161.3	29.2	7.1	58.190	-94.3	14*39*3	10.4					481						
2178	3	164.55	17*43*31	11/13/63	147	5.9	160.8	28.4	7.4	58.179	-85.6	18*2*33	19.0					481						
2180	3	115.21	20*58*19	11/13/63	147	7.4	160.5	27.6	7.7	58.168	-79.7	21*23*3	24.7					481						
2181	3	90.54	22*35*44	11/13/63	147	8.3	160.6	27.2	8.0	58.163	-67.0	23*2*58	27.2					481						
2190	2	-131.51	13*12*24	11/14/63	148	15.1	161.5	24.7	10.2	58.115	-97.1	13*20*3	7.7					482						
2193	3	154.46	18*4*37	11/14/63	148	16.8	161.1	23.7	10.6	58.099	-84.9	18*24*33	19.9					482						
2194	3	129.79	19*42*1	11/14/63	148	17.5	161.0	23.3	10.8	58.093	-71.6	20*5*33	23.5					482						
2195	3	105.12	21*19*26	11/14/63	148	18.3	161.1	23.0	11.0	58.088	-53.2	21*44*33	25.1					482						
2196	2	80.45	22*56*50	11/14/63	148	19.2	161.4	22.6	11.2	58.083	-65.9	23*34*33	37.7					482						
2205	2	-141.60	13*33*30	11/15/63	149	25.3	163.6	20.5	13.4	58.034	-8.9	13*42*3	8.6					483						
2207	3	169.05	16*48*19	11/15/63	149	26.5	163.6	19.9	13.7	58.023	-86.8	17*6*33	18.2					483						
2208	3	144.37	18*25*43	11/15/63	149	27.2	163.6	19.5	13.9	58.018	-23.4	18*47*3	21.3					483						
2209	3	119.70	20*3*8	11/15/63	149	28.0	163.7	19.1	14.0	58.013	-70.4	20*25*33	22.4					483						
2218	1	-102.34	10*39*48	11/16/63	150	34.8	168.9	16.5	16.6	57.964	-94.3	10*50*3	10.3					484						
2219	2	-127.01	12*17*12	11/16/63	150	35.3	169.3	16.4	16.8	57.959	-81.6	12*25*3	7.9					484						
2220	2	-151.69	13*54*37	11/16/63	150	35.9	169.5	16.2	17.0	57.953	0.8	14*10*8	15.5					484						
2225	2	84.94	22*1*39	11/16/63	150	39.6	171.5	14.1	17.9	57.926	-66.8	22*38*33	36.9					484						
2234	2	-137.10	12*38*19	11/17/63	151	43.2	178.9	13.0	20.4	57.877	-76.0	12*47*33	9.2					485						
2235	2	-161.77	14*15*43	11/17/63	151	43.5	179.3	12.9	20.5	57.871	-82.8	14*28*33	12.8					485						
2239	2	99.53	20*45*21	11/17/63	151	44.9	181.5	12.3	21.1	57.849	-54.3	21*21*33	36.2					485						
2247	1	-97.85	9*44*36	11/18/63	152	46.1	190.3	11.9	23.3	57.805	-94.0	9*55*33	11.0					486						
2251	3	163.45	16*14*14	11/18/63	152	46.0	192.5	12.2	24.0	57.783	-85.7	16*33*33	19.3					486						
2253	3	114.11	19*29*3	11/18/63	152	46.3	193.8	12.1	24.2	57.772	-64.3	19*53*33	24.5					486						
2254	2	89.44	21*6*27	11/18/63	152	46.5	194.9	11.9	24.4	57.766	-67.5	21*44*3	37.6					486						
2261	1	-83.29	8*28*18	11/19/63	153	45.3	202.9	12.0	26.4	57.727	-96.6	8*36*33	8.3					487						

REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE										FMR TAPE REEL NO.
ORBIT NO.	COA STA	SATELLITE ORBITAL			EQUATOR ASCENDING			CROSSING AT (AND)		SPIN DECLI -NA -TION (DEG)	VECTOR		ATTITUDE		SPIN RATE (DEG /SEC)	BEGIN MINU -TES W/R/T AND	E N D			DROPOUTS, MINUTES W/R/T AND					
		EARTH LONGI -TUD (DEG)	HOURS	MINUTES	SECONDS (GMT)	CALENDAR DATE	TIROS DAY	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)		TOT (MIN. AFTER AND)	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND	FROM--			TO--								
2262	1	-107.96	10*	5*43		11/19/63	153	44.9	203.6	12.2	26.6	57.721	-82.9	10*17*33	11.8							487			
2263	2	-132.63	11*43*	7		11/19/63	153	44.6	204.1	12.5	26.8	57.715	-80.7	11*51*33	8.4							487			
2264	2	-157.30	13*20*31			11/19/63	153	44.3	204.5	12.7	27.0	57.710	-83.1	13*32*57	12.4							487			
2266	1	153.34	16*35*20			11/19/63	153	44.0	205.3	13.0	27.3	57.698	-70.9	17* 6*33	31.2							487			
2267	1	128.67	18*12*45			11/19/63	153	43.9	205.9	13.0	27.3	57.692	-61.0	18*48*57	36.2							487			
2268	2	103.99	19*50* 9			11/19/63	153	43.8	206.7	12.9	27.5	57.687	-56.3	20*24*33	34.4							487			
2269	2	79.32	21*27*34			11/19/63	153	43.5	207.8	12.8	27.8	57.681	-57.2	22* 6* 3	38.5							487			
2278	2	-142.72	12* 4*13			11/20/63	154	39.1	214.6	14.4	30.1	57.629	-78.6	12*12*33	8.3							488			
2280	1	167.93	15*19* 2			11/20/63	154	38.2	215.0	14.9	30.5	57.618	-61.5	15*49*57	30.9							488			
2281	1	143.25	16*56*27			11/20/63	154	37.9	215.3	15.1	30.6	57.612	-60.1	17*29*33	33.1							488			
2283	2	93.90	20*11*15			11/20/63	154	37.3	216.5	15.2	30.8	57.600	-40.4	20*50* 3	38.8							488			
2291	1	-103.46	9*10*31			11/21/63	155	37.1	216.9	14.6	31.6	57.553	-93.4	9*21*58	11.5							489			
2292	2	-128.14	10*47*55			11/21/63	155	37.1	216.9	14.5	31.6	57.547	-81.0	10*55*58	8.1							489			
2293	2	-152.81	12*25*20			11/21/63	155	37.1	217.0	14.3	31.7	57.541	-84.8	12*36*33	11.2							489			
2295	3	157.83	15*40* 9			11/21/63	155	37.2	217.1	14.1	31.8	57.529	-85.7	15*59*33	19.4							489			
2296	1	133.16	17*17*33			11/21/63	155	37.2	217.1	13.9	31.8	57.523	-65.4	17*53*23	35.8							489			
2297	3	108.49	18*54*57			11/21/63	155	37.2	217.2	13.8	31.9	57.517	-56.2	19*19*33	24.6							489			
2298	2	83.82	20*32*22			11/21/63	155	37.2	217.2	13.7	31.9	57.511	-65.3	21*10* 3	37.7							489			
2305	1	-88.88	7*54*13			11/22/63	156	37.5	217.2	12.7	32.3	57.469	-95.3	8* 3*33	9.3							490			
2306	1	-113.55	9*31*37			11/22/63	156	37.5	217.3	12.6	32.3	57.464	-80.5	9*44*57	13.3							490			
2307	2	-138.22	11* 9* 1			11/22/63	156	37.5	217.3	12.4	32.4	57.457	-27.0	11*17*33	8.5							490			
2308	2	-162.90	12*46*26			11/22/63	156	37.5	217.4	12.3	32.5	57.451	-83.4	12*59*33	13.1							490			
2309	3	172.42	14*23*50			11/22/63	156	37.6	217.4	12.1	32.5	57.445	-78.8	14*42*33	18.7							490			
2311	3	123.07	17*38*39			11/22/63	156	37.6	217.5	11.8	32.5	57.433	-54.4	18* 1*33	22.9							490			
2312	2	98.40	19*16* 4			11/22/63	156	37.6	217.5	11.7	32.6	57.426	-68.8	19*52* 3	36.0							490			
2320	1	-98.97	8*15*19			11/23/63	157	37.9	217.6	10.5	33.0	57.377	-76.1	8*25*58	10.7							491			

ORBIT NO.		REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.
		CDA STA		SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT		SPIN		VECTOR		ATTITUDE			BEGIN	E N D		DROPOUTS, MINUTES		
				EARTH LCNGI -TITUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER ANO)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T ANO	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T ANO	FROM-		TO-				
2321	1	-123.65	9*52*43	11/23/63	157	38.0	217.6	10.4	33.0	57.371	-30.1	10* 7*33	14.8	491								
2322	2	-148.32	11*30* 8	11/23/63	157	38.0	217.7	10.2	33.1	57.364	-59.6	11*40*33	10.4	491								
2324	3	162.33	14*44*57	11/23/63	157	38.1	217.8	9.9	33.2	57.352	-63.2	15* 3*33	18.6	491								
2325	3	137.66	16*22*21	11/23/63	157	38.1	217.8	9.7	33.2	57.345	-66.4	16*43*33	21.2	491								
2326	3	112.98	17*59*45	11/23/63	157	38.1	217.8	9.6	33.2	57.339	5.2	18*23*33	23.8	491								
2327	2	88.31	19*37*10	11/23/63	157	38.1	217.8	9.4	33.3	57.333	-61.9	20*15* 3	37.9	491								
2336	2	-133.73	10*13*50	11/24/63	158	38.4	217.9	8.1	33.7	57.275	-72.9	10*21*33	7.7	492								
2337	2	-158.41	11*51*14	11/24/63	158	38.4	217.9	8.0	33.7	57.269	-78.4	12* 3*33	12.3	492								
2339	3	152.24	15* 6* 3	11/24/63	158	38.5	218.0	7.7	33.7	57.256	-61.4	15*26*33	20.5	492								
2342	2	78.22	19*58*16	11/24/63	158	38.6	218.0	7.2	33.9	57.236	-64.8	20*37*33	39.3	492								
2350	1	-119.15	8*57*31	11/25/63	159	38.9	218.0	6.0	34.2	57.183	-74.6	9*11*33	14.0	493								
2351	2	-143.82	10*34*56	11/25/63	159	38.9	218.0	5.8	34.2	57.176	-71.0	10*44*33	9.6	493								
2364	1	-104.58	7*41*13	11/26/63	160	39.4	218.0	3.7	34.7	57.088	-64.5	7*52*33	11.3	494								
2365	2	-129.26	5*18*37	11/26/63	160	39.5	218.0	3.5	34.7	57.081	-74.0	9*27*33	8.9	494								
2366	2	-153.93	10*56* 2	11/26/63	160	39.5	218.0	3.4	34.7	57.074	-76.2	11* 7*33	11.5	494								
2368	3	156.72	14*10*51	11/26/63	160	39.6	218.1	3.0	34.7	57.060	-61.5	14*30*33	19.7	494								
2369	3	132.04	15*48*15	11/26/63	160	39.6	218.1	2.8	34.8	57.053	-66.8	16*10*33	22.3	494								
2370	3	107.37	17*25*40	11/26/63	160	39.7	218.1	2.7	34.8	57.046	-63.4	17*50*33	24.9	494								
2371	2	82.70	19* 3* 4	11/26/63	160	39.7	218.1	2.5	34.9	57.039	-60.2	19*42*58	39.9	494								
2378	1	-90.00	6*24*55	11/27/63	161	40.1	218.0	1.4	35.1	56.999	-1.4	6*34* 3	9.1	495								
2379	1	-114.67	8* 2*19	11/27/63	161	40.0	218.0	1.2	35.1	56.993	-58.0	8*14* 3	11.7	495								
2437	1	-105.68	6*11*55	12/ 1/63	165	33.0	219.2	-4.2	38.8	56.608	-78.2	6*23*33	11.6	496								
2439	2	-155.03	9*26*43	12/ 1/63	165	32.8	219.1	-4.4	38.9	56.594	-62.1	9*39*33	12.8	496								
2453	2	-140.44	8*10*25	12/ 2/63	166	31.1	219.0	-5.8	39.7	56.500	-60.3	8*19* 3	8.6	497								
2456	3	145.53	13* 2*38	12/ 2/63	166	30.8	218.9	-6.1	39.9	56.479	-57.0	13*22*33	19.9	497								
2457	3	120.85	14*40* 3	12/ 2/63	166	30.7	218.9	-6.2	39.9	56.472	-67.3	15* 3* 3	23.0	497								

REACOUT										ORBIT				TIME INTERVAL OF FILE ON FMR TAPE						FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL			EQUATOR ASCENDING		CROSSING AT		SPIN DECLI -TION (DEG)	VECTOR RIGHT ASCEN -SION (DEG)	ATTITUDE		SPIN RATE (DEG /SEC)	BEGIN MINU -TES W/R/T AND	E N D			DROPOUTS, MINUTES W/R/T AND		
		EARTH LCNGI -TIDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	MINU -TES W/R/T AND			HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND			FROM-	TO-				
2458	2	96.18	16*17*27	12/ 2/63	166	30.6	218.9	-6.4	39.9	56.466	-61.5	16*52*33	35.1					497		
2466	1	-101.20	5*16*42	12/ 3/63	167	29.6	218.9	-7.3	40.5	56.411	-75.2	5*26*58	10.3					498		
2468	2	-150.54	8*31*31	12/ 3/63	167	29.3	218.8	-7.4	40.6	56.397	-64.5	8*42* 3	10.5					498		
2471	3	135.43	13*23*44	12/ 3/63	167	29.1	218.6	-7.7	40.7	56.377	-66.2	13*45* 3	21.3					498		
2473	3	86.09	16*38*33	12/ 3/63	167	28.8	218.6	-8.0	40.8	56.363	-56.2	17*15*33	37.0					498		
2482	2	-135.96	7*15*13	12/ 4/63	168	27.7	218.4	-9.0	41.4	56.302	-65.4	7*22*33	7.3					499		
2485	3	150.02	12* 7*26	12/ 4/63	168	27.4	218.3	-9.3	41.5	56.281	-66.6	12*27* 3	19.6					499		
2486	3	125.35	13*44*50	12/ 4/63	168	27.3	218.2	-9.4	41.6	56.274	-67.3	14* 7* 3	22.2					499		
2487	2	100.67	15*22*14	12/ 4/63	168	27.2	218.2	-9.5	41.5	56.267	-62.8	15*56* 3	33.8					499		
2497	2	-146.04	7*36*18	12/ 5/63	169	25.9	218.0	-10.6	42.2	56.199	-63.4	7*45*33	9.3					500		
2499	3	164.60	10*51* 7	12/ 5/63	169	25.7	217.8	-10.8	42.3	56.185	-64.9	11*10*33	19.4					500		
2500	3	139.93	12*28*32	12/ 5/63	169	25.7	217.8	-10.9	42.3	56.178	-67.0	12*49*33	21.0					500		
2502	2	90.58	15*43*20	12/ 5/63	169	25.4	217.7	-11.2	42.5	56.164	-52.9	16*19* 3	35.7					500		
2512	2	-156.13	7*57*24	12/ 6/63	170	24.2	217.4	-12.3	43.0	56.088	-61.9	8* 8*33	11.2					501		
2515	3	129.85	12*49*38	12/ 6/63	170	24.0	217.2	-12.6	43.1	56.067	-64.9	13*11*33	21.9					501		
2516	2	105.17	14*27* 2	12/ 6/63	170	23.9	217.2	-12.8	43.2	56.061	-61.5	15* 0*33	33.5					501		
2517	2	80.50	16* 4*26	12/ 6/63	170	23.8	217.2	-12.9	43.3	56.054	-51.2	16*42* 3	37.6					501		
2526	2	-141.54	6*41* 6	12/ 7/63	171	22.7	216.8	-14.0	43.7	55.991	-41.0	6*49* 3	8.0					502		
2530	3	119.76	13*10*43	12/ 7/63	171	22.4	216.5	-14.4	43.9	55.963	-52.2	13*33*33	22.8					502		
2531	2	95.08	14*48* 8	12/ 7/63	171	22.3	216.5	-14.5	44.0	55.956	-4.7	15*23* 3	34.9					502		
2539	1	-102.28	3*47*23	12/ 8/63	172	21.4	216.2	-15.5	44.4	55.901	-83.9	3*57*33	10.2					503		
2541	2	-151.63	7* 2*12	12/ 8/63	172	21.2	216.0	-15.7	44.5	55.887	-63.5	7*12*33	10.4					503		
2543	1	159.01	10*17* 1	12/ 8/63	172	21.0	215.9	-15.9	44.6	55.873	-71.1	10*48* 3	31.0					503		
2546	2	85.00	15* 9*14	12/ 8/63	172	20.8	215.8	-16.3	44.7	55.852	-52.3	15*46* 3	36.8					503		
2555	2	-137.04	5*45*53	12/ 9/63	173	19.7	215.2	-17.4	45.2	55.790	-79.1	5*53*33	7.7					504		
2559	3	124.25	12*15*31	12/ 9/63	173	18.7	214.6	-17.3	45.5	55.762	-49.3	12*38* 3	22.5					504		

ORBIT NO.	COA STA	REACOUT					ORBIT					TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.	
		SATELLITE ORBITAL		EQUATOR CROSSING AT		SPIN	VECTOR	ATTITUDE		BEGIN	END		DROPOUTS, MINUTES					
		EARTH LCNGT -ITUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY			DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)		MINI -MUM WADIR (DEG)	TOT (MIN. AFTER)	MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND	FROM- TO-		
2560	2	99.58	13*52*55	12/ 9/63	173	18.4	214.6	-17.3	45.6	55.755	-62.4	14*27*33	34.6			504		
2568	1	-97.80	2*52*11	12/10/63	174	15.8	214.0	-17.4	46.4	55.700	-89.0	3* 2*53	10.7			505		
2570	2	-147.15	6* 6*59	12/10/63	174	15.3	213.7	-17.3	46.5	55.687	-63.5	6*15*33	8.6			505		
2573	1	138.83	10*59*12	12/10/63	174	14.7	213.2	-17.2	46.8	55.666	-58.0	11*33* 3	33.9			505		
2574	3	114.15	12*36*37	12/10/63	174	14.4	213.2	-17.2	46.8	55.659	-50.5	13* 0* 3	23.4			505		
2575	2	89.48	14*14* 1	12/10/63	174	14.1	213.1	-17.2	46.9	55.652	-57.7	14*49*33	35.5			505		
2582	1	-83.22	1*35*52	12/11/63	175	11.8	212.7	-17.3	47.6	55.604	-89.5	1*44* 3	8.2			506		
2583	1	-107.89	3*13*16	12/11/63	175	11.5	212.6	-17.3	47.7	55.597	-79.4	3*24* 3	10.8			506		
2587	1	153.41	9*42*54	12/11/63	175	10.6	211.9	-17.1	48.1	55.570	-62.5	10*14*33	31.7			506		
2588	1	128.74	11*20*18	12/11/63	175	10.4	211.8	-17.0	48.1	55.563	-54.6	11*55*33	35.3			506		
2589	2	104.67	12*57*43	12/11/63	175	10.1	211.8	-17.0	48.2	55.556	-49.7	13*31*58	34.3			506		
2590	2	79.39	14*35* 7	12/11/63	175	9.8	211.7	-17.1	48.3	55.549	-50.5	15*12*58	37.9			506		
2597	1	-93.30	1*56*58	12/12/63	176	7.5	211.3	-17.2	49.0	55.501	-85.3	2* 5*33	8.6			507		
2599	2	-142.65	5*11*47	12/12/63	176	7.0	211.0	-17.1	49.2	55.488	-65.4	5*19*33	7.8			507		
2602	1	143.33	10* 4* 0	12/12/63	176	6.3	210.5	-16.9	49.4	55.467	-71.8	10*37* 3	33.1			507		
2603	3	118.66	11*41*24	12/12/63	176	6.1	210.4	-16.9	49.5	55.461	10.9	12* 4*33	23.2			507		
2604	2	93.98	13*18*48	12/12/63	176	5.7	210.4	-16.9	49.6	55.454	-51.1	13*54* 3	35.3			507		
2612	1	-103.39	2*18* 4	12/13/63	177	3.2	209.9	-16.9	50.4	55.399	-77.1	2*27*33	9.5			508		
2614	2	-152.73	5*32*52	12/13/63	177	2.7	209.6	-16.8	50.6	55.386	-64.6	5*42*33	9.7			508		
2616	3	157.91	8*47*41	12/13/63	177	2.3	209.3	-16.7	50.8	55.372	-65.4	9* 6*33	18.9			508		
2617	1	133.24	10*25* 6	12/13/63	177	2.0	209.2	-16.7	50.8	55.365	-68.1	10*59*33	34.5			508		
2618	2	108.57	12* 2*30	12/13/63	177	1.7	209.1	-16.7	50.9	55.359	-50.8	12*35*33	33.1			508		
2619	2	83.89	13*39*54	12/13/63	177	1.4	209.1	-16.7	51.0	55.352	-51.7	14*16*33	36.7			508		
2626	1	-88.80	1* 1*45	12/14/63	178	-0.8	208.7	-16.8	51.7	55.305	-86.9	1*10* 3	8.3			509		
2628	2	-138.14	4*16*34	12/14/63	178	-1.3	208.5	-16.7	51.9	55.291	-48.8	4*24* 3	7.5			509		
2632	3	123.16	10*46*11	12/14/63	178	-2.2	207.9	-16.5	52.2	55.264	-55.7	11* 8*33	22.4			509		

ORBIT NO.		REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE						FMR TAPE REEL NO.
		CDA STA		SATELLITE ORBITAL		EQUATOR CROSSING AT		SPIN	VECTOR		ATTITUDE		BEGIN		E N D		DROPOUTS, MINUTES						
				EARTH LCNGI (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY		DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND	FROM- TO-						
2643	2	-148.23	4*37*40	12/15/63	179	-5.5	207.2	-16.4	53.3	55.190	-60.4	4*47*3	9.4					510					
2645	3	162.42	7*52*28	12/15/63	179	-5.9	206.9	-16.3	53.4	55.177	-63.4	8*11*33	19.1					510					
2646	1	137.74	9*29*53	12/15/63	179	-6.2	206.8	-16.3	53.5	55.170	-65.6	10*3*58	34.1					510					
2647	3	113.07	11*7*17	12/15/63	179	-6.5	206.7	-16.2	53.6	55.164	-59.4	11*30*33	23.3					510					
2656	1	-108.97	1*43*57	12/16/63	180	-9.2	206.4	-16.2	54.5	55.103	-81.4	1*55*3	11.1					511					
2658	2	-158.31	4*58*45	12/16/63	180	-9.7	206.1	-16.1	54.7	55.090	-62.2	5*10*3	11.3					511					
2660	3	152.33	8*13*34	12/16/63	180	-10.1	205.9	-16.0	54.8	55.077	-61.9	8*32*33	19.0					511					
2661	1	127.66	9*50*59	12/16/63	180	-10.4	205.8	-16.0	54.9	55.070	-66.0	10*26*33	35.6					511					
2662	2	102.99	11*28*23	12/16/63	180	-10.7	205.7	-16.0	55.0	55.064	-49.9	12*2*3	33.7					511					
2663	2	78.32	13*5*48	12/16/63	180	-11.0	205.7	-15.9	55.1	55.057	-51.4	13*43*3	37.3					511					
2672	2	-143.77	3*42*27	12/17/63	181	-14.5	205.1	-15.4	56.1	54.997	-69.6	3*50*33	8.1					512					
2675	3	142.20	8*34*40	12/17/63	181	-16.6	204.4	-14.2	56.6	54.978	-54.5	8*55*33	20.9					512					
2676	3	117.53	10*12*5	12/17/63	181	-17.4	204.4	-13.8	56.8	54.971	-64.1	10*35*33	23.5					512					
2677	2	92.86	11*49*29	12/17/63	181	-18.4	204.5	-13.4	57.0	54.964	-53.1	12*25*33	36.1					512					
2687	2	-153.86	4*3*33	12/18/63	182	-26.8	206.5	-10.9	59.5	54.899	-69.9	4*14*33	11.0					513					
2690	3	132.11	8*55*46	12/18/63	182	-28.8	206.3	-9.9	60.0	54.879	-53.9	9*18*3	22.3					513					
2691	3	107.44	10*33*10	12/18/63	182	-29.7	206.5	-9.5	60.2	54.873	-63.2	10*57*33	24.4					513					
2692	2	82.77	12*10*35	12/18/63	182	-30.6	206.8	-9.1	60.5	54.866	-59.9	12*48*3	37.5					513					
2699	1	-89.93	23*32*25	12/18/63	182	-36.4	210.5	-7.8	62.5	54.821	-85.4	23*40*33	8.1					514					
2701	2	-139.27	2*47*14	12/19/63	183	-37.6	211.0	-7.5	63.0	54.808	-65.7	2*55*33	8.3					514					
2704	3	146.70	7*39*27	12/19/63	183	-39.3	211.3	-6.8	63.4	54.788	-70.9	7*59*33	20.1					514					
2705	3	122.03	9*16*52	12/19/63	183	-40.1	211.5	-6.5	63.6	54.782	-65.0	9*39*33	22.7					514					
2706	2	97.35	10*54*16	12/19/63	183	-40.9	212.0	-6.1	63.8	54.775	-38.8	11*29*33	35.3					514					
2743	1	-95.52	22*58*18	12/21/63	195	-56.9	250.3	-1.2	73.1	54.539	-54.5	23*7*33	9.3					515					
2745	2	-144.86	2*13*7	12/22/63	186	-56.7	252.4	-1.4	73.5	54.526	-63.3	2*22*33	9.4					515					
2747	1	165.78	5*27*56	12/22/63	186	-56.6	254.1	-1.5	73.9	54.514	-63.6	5*58*3	30.1					515					

READOUT														ORBIT						TIME INTERVAL OF FILE ON FMR TAPE						FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		ASCENDING		CROSSING AT		SPIN		VECTOR		ATTITUDE		BEGIN	E N D		DROPOUTS, MINUTES W/R/T AND									
		EARTH LNCGI -TUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TURNS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND		FROM-	TO-										
2748	1	141.11	7* 5*20	12/22/63	186	-56.6	255.0	-1.5	74.0	54.507	-11.6	7*38*33	33.2					515								
2749	2	116.44	8*42*44	12/22/63	186	-56.7	256.2	-1.4	74.2	54.501	-53.7	9*16*33	33.8					515								
2750	2	91.76	10*20* 9	12/22/63	186	-56.7	257.8	-1.2	74.4	54.495	-52.4	10*55*33	35.4					515								
2758	1	-105.61	23*19*24	12/22/63	186	-53.8	269.6	-1.5	76.7	54.445	-59.7	23*30*28	11.1					516								
2760	2	-154.95	2*34*12	12/23/63	187	-52.9	271.1	-2.0	77.1	54.432	-61.6	2*45* 3	10.9					516								
2762	1	155.70	5*49* 1	12/23/63	187	-52.3	272.3	-2.3	77.5	54.420	-61.9	6*20*33	31.5					516								
2764	2	106.35	9* 3*50	12/23/63	187	-51.8	274.2	-2.3	77.9	54.407	-41.8	9*37*33	33.7					516								
2772	1	-91.02	22* 3* 5	12/23/63	187	-46.5	282.4	-3.1	80.1	54.358	-35.5	22*11*33	8.5					517								
2774	2	-140.38	1*17*54	12/24/63	188	-45.1	283.2	-3.7	80.6	54.346	-49.7	1*26*33	8.7					517								
2777	1	145.60	6*10* 7	12/24/63	188	-43.6	283.9	-4.5	81.1	54.327	-59.9	6*42*33	32.4					517								
2787	1	-101.11	22*24*11	12/24/63	188	-35.7	289.5	-6.3	83.7	54.266	-81.1	22*34*33	10.4					518								
2798	2	-125.79	0* 1*35	12/25/63	189	-34.9	289.5	-6.7	83.9	54.260	-74.2	0* 8* 3	6.5					518								
2789	2	-150.46	1*39* 0	12/25/63	189	-34.2	289.5	-7.2	84.1	54.254	-78.9	1*48*33	9.6					518								
2806	1	150.10	5*14*54	12/26/63	190	-20.9	291.4	-12.6	87.8	54.152	5.0	5*47*33	32.7					519								
2807	1	125.42	6*52*18	12/26/63	190	-20.3	291.4	-13.0	88.0	54.146	-51.7	7*28*33	36.3					519								
2808	2	100.75	8*29*43	12/26/63	190	-19.6	291.5	-13.2	88.1	54.140	-48.6	9* 4*33	34.8					519								
2816	1	-96.62	21*28*58	12/26/63	190	-11.9	292.3	-15.7	90.2	54.092	-75.7	21*38*33	9.6					520								
2817	1	-121.29	23* 6*22	12/26/63	190	-11.0	292.1	-16.2	90.4	54.086	-75.0	23*20*33	14.2					520								
2818	2	-145.96	C*43*46	12/27/63	191	-10.2	291.8	-16.8	90.6	54.080	-69.5	0*53* 3	9.3					520								
2821	1	140.01	5*35*59	12/27/63	191	-8.3	290.9	-18.2	91.1	54.063	-38.9	6* 9*33	33.6					520								
2823	2	90.66	8*50*48	12/27/63	191	-6.8	290.8	-18.9	91.4	54.051	-54.9	9*26*33	35.8					520								
2831	1	-106.71	21*50* 3	12/27/63	191	1.0	290.5	-21.7	93.5	54.004	-80.8	22* 1* 3	11.0					521								
2832	2	-131.38	23*27*28	12/27/63	191	1.8	290.2	-22.2	93.8	53.998	-72.6	23*35* 3	7.6					521								
2833	2	-156.05	1* 4*52	12/28/63	192	2.6	289.7	-22.8	93.9	53.993	-16.2	1*15*33	10.7					521								
2836	1	129.92	5*57* 5	12/28/63	192	4.3	288.8	-24.2	94.4	53.975	-28.2	6*32*33	35.5					521								
2838	2	80.58	9*11*54	12/28/63	192	4.2	288.8	-24.2	94.6	53.964	-38.7	9*49*33	37.7					521								

REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE						FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT (ANO)		SPIN		VECTOR		ATTITUDE		BEGIN MINU -TES W/R/T AND	E N D		DROPOUTS, MINUTES W/R/T AND				
		EARTH LCNGI -TUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -NUM NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND	FROM-- TO--								
2845	1	-92.12	20*33*44	12/28/63	192	4.2	288.6	-22.8	94.8	53.923	-84.5	20*43*3	9.3				522				
2846	1	-116.79	22*11*9	12/28/63	192	4.2	288.5	-22.7	94.9	53.918	-73.8	22*24*3	12.9				522				
2847	2	-141.47	23*48*33	12/28/63	192	4.2	288.5	-22.5	94.8	53.912	-70.5	23*57*3	8.5				522				
2850	1	144.51	4*40*46	12/29/63	193	4.1	288.4	-21.9	94.9	53.895	-6.7	5*13*33	32.8				522				
2852	2	95.16	7*55*35	12/29/63	193	4.1	288.3	-21.5	95.0	53.883	-40.9	8*30*33	35.0				522				
2861	2	-126.88	22*32*14	12/29/63	193	4.0	288.0	-19.8	95.3	53.832	-74.8	22*39*3	6.8				523				
2862	2	-151.55	0*9*38	12/30/63	194	4.0	288.0	-19.6	95.4	53.827	-77.4	0*19*33	9.9				523				
2867	2	85.08	8*16*39	12/30/63	194	4.0	288.0	-18.5	95.5	53.799	-39.7	8*54*33	37.9				523				
2874	1	-87.62	19*38*30	12/30/63	194	3.9	287.8	-17.1	95.8	53.760	-21.4	19*47*28	9.0				524				
2876	2	-136.97	22*53*19	12/30/63	194	3.9	287.7	-16.8	95.8	53.749	-73.2	23*2*3	8.7				524				
2877	2	-161.65	0*30*43	12/31/63	195	3.9	287.7	-16.6	95.9	53.746	-77.9	0*44*3	13.3				524				
2881	2	99.64	7*0*21	12/31/63	195	3.9	287.6	-15.8	95.9	53.725	-42.5	7*34*33	34.2				524				
2890	1	-122.39	21*37*0	12/31/63	195	3.9	287.3	-14.1	96.3	53.672	-75.2	21*50*33	13.6				525				
2891	2	-147.07	23*14*24	12/31/63	195	3.9	287.3	-13.9	96.3	53.666	-72.2	23*24*3	9.7				525				
2909	1	128.82	4*27*43	1/2/4	197	4.0	286.7	-10.5	96.9	53.561	16.0	5*2*33	34.8				526				
2910	2	104.15	6*5*7	1/2/4	197	4.0	286.7	-10.4	97.0	53.555	-49.7	6*38*33	33.4				526				
2911	2	79.48	7*42*31	1/2/4	197	4.0	286.7	-10.2	97.0	53.549	-52.5	8*19*33	37.0				526				
2920	2	-142.57	22*19*11	1/2/4	197	4.2	286.5	-8.5	97.3	53.497	-74.1	22*28*3	8.9				527				
2923	1	143.41	3*11*24	1/3/4	198	4.2	286.3	-8.0	97.4	53.480	-57.4	3*44*33	33.2				527				
2933	1	-103.31	19*25*28	1/3/4	198	4.5	286.0	-6.4	0.3	53.422	-77.0	19*36*33	11.1				528				
2935	2	-152.65	22*40*16	1/3/4	198	4.5	285.9	-6.0	0.4	53.410	-72.7	22*51*3	10.8				528				
2937	1	157.99	1*55*5	1/4/4	199	4.6	285.9	-5.7	0.5	53.399	-61.9	2*27*3	32.0				528				
2938	1	133.33	3*32*29	1/4/4	199	4.6	285.8	-5.5	0.5	53.393	-53.6	4*7*57	35.5				528				
2940	2	83.98	6*47*18	1/4/4	199	4.6	285.8	-5.2	0.6	53.382	-38.2	7*25*3	37.8				528				
2947	1	-88.72	18*9*9	1/4/4	199	4.8	285.6	-3.9	0.8	53.342	-85.1	18*18*3	8.9				529				
2948	1	-113.39	19*46*33	1/4/4	199	4.8	285.7	-3.6	0.9	53.336	-60.9	19*59*3	12.5				529				

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		REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL			EQUATOR CROSSING AT		SPIN		VECTOR		ATTITUDE		BEGIN	E N D			DROPOUTS, MINUTES W/R/T AND					
		EARTH LNCGI -TUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER ANO)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T ANO	HOURS MINUTES SECONDS (GMT)		MINU -TES W/R/T ANO	FROM- TO-							
3013	2	82.89	5*17*56	1/ 9/ 4	204	6.5	285.4	9.1	3.7	52.983	-19.8	5*54*33	36.6					533				
3021	1	-114.48	18*17*11	1/ 9/ 4	204	6.8	285.4	10.6	4.0	52.941	-76.0	18*29*33	12.4					534				
3022	2	-139.15	19*54*36	1/ 9/ 4	204	6.9	285.4	10.8	4.1	52.935	-72.2	20* 3* 3	8.5					534				
3025	1	146.82	0*46*49	1/10/ 4	205	7.0	285.4	11.4	4.2	52.929	-21.4	1*19*33	32.7					534				
3027	2	97.48	4* 1*37	1/10/ 4	205	7.1	285.4	11.7	4.4	52.923	-40.9	4*36*33	34.9					534				
3035	1	-99.89	17* 0*52	1/10/ 4	205	7.5	285.5	13.2	4.7	52.860	-76.7	17*11* 3	10.2					535				
3037	2	-149.23	20*15*41	1/10/ 4	205	7.6	285.5	13.6	4.8	52.850	-79.1	20*26* 3	10.4					535				
3039	1	161.41	23*30*30	1/10/ 4	205	7.7	285.6	14.0	5.0	52.839	-63.1	0* 1*33	31.1					535				
3040	1	136.74	1* 7*54	1/11/ 4	206	7.7	285.6	14.2	5.0	52.834	-55.0	1*42*33	34.7					535				
3042	2	87.40	4*22*43	1/11/ 4	206	7.8	285.7	14.6	5.1	52.824	-39.7	4*58*33	35.8					535				
3050	1	-109.97	17*21*58	1/11/ 4	206	8.2	285.7	16.1	5.5	52.782	-79.8	17*34* 3	12.1					536				
3052	2	-159.32	20*36*46	1/11/ 4	206	8.3	285.8	16.4	5.6	52.772	-61.8	20*48*33	11.8					536				
3054	1	151.33	23*51*35	1/11/ 4	206	8.4	285.8	16.8	5.8	52.761	-61.7	0*23*33	32.0					536				
3055	1	126.66	1*28*59	1/12/ 4	207	8.5	285.8	16.9	5.8	52.756	-53.6	2* 4*33	35.6					536				
3064	1	-95.38	16* 5*39	1/12/ 4	207	9.0	285.9	18.5	6.4	52.709	-88.8	16*15* 3	9.4					537				
3065	1	-120.06	17*43* 3	1/12/ 4	207	9.0	285.9	18.7	6.4	52.704	-74.8	17*56*33	13.5					537				
3066	2	-144.72	15*20*27	1/12/ 4	207	9.1	286.0	19.0	6.5	52.699	-71.7	19*30* 3	9.6					537				
3069	1	141.25	0*12*40	1/13/ 4	208	9.3	286.1	19.5	6.7	52.683	-59.7	0*45*33	32.9					537				
3071	2	91.90	3*27*29	1/13/ 4	208	9.4	286.1	19.8	6.8	52.673	-41.4	4* 2* 3	34.6					537				
3079	1	-105.46	16*26*44	1/13/ 4	208	9.9	286.2	21.1	7.3	52.631	-77.4	16*38* 3	11.3					538				
3080	2	-130.13	18* 4* 8	1/13/ 4	208	10.0	286.2	21.3	7.4	52.625	-73.9	18*11*33	7.4					538				
3081	2	-154.81	19*41*33	1/13/ 4	208	10.1	286.3	21.4	7.5	52.620	-70.0	19*52*33	11.0					538				
3083	3	155.84	22*56*21	1/13/ 4	208	10.2	286.3	21.7	7.5	52.610	-64.1	23*15*33	19.2					538				
3084	3	131.13	0*33*46	1/14/ 4	209	10.3	286.3	21.9	7.6	52.604	-58.4	0*56*33	22.8					538				
3085	3	106.45	2*11*10	1/14/ 4	209	10.3	286.3	22.1	7.7	52.599	-63.2	2*35*33	24.4					538				
3094	1	-115.59	16*47*49	1/14/ 4	209	11.3	286.5	23.6	8.3	52.552	-76.6	17* 0* 3	12.2					539				

REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE					
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT		SPIN VECTOR		ATTITUDE		BEGIN	E N D		DROPOUTS, MINUTES		FMR TAPE REEL NO.			
		LONGI -TUD (DEG)	MINUTES	HOURS	MINUTES	SECCNDS (GMT)	DATE	DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)		TOT (MIN. AFTER ANO)	SPIN RATE (DEG /SEC)	MINU -TES W/R/T ANO	HOURS MINUTES SECONDS (GMT)		MINU -TES W/R/T ANO	FROM- TO-	
3095	2	-140.26	18*25*14	1/14/	4	209	11.7	286.4	23.4	8.5	52.547	-34.5	18*34* 3	8.8			539			
3098	3	145.72	23*17*27	1/14/	4	209	13.0	286.0	22.9	8.8	52.531	-70.1	23*38*33	21.1			539			
3099	3	121.04	C*54*51	1/15/	4	210	13.4	286.0	22.7	8.9	52.525	-56.0	1*18* 3	23.2			539			
3108	1	-101.00	15*31*30	1/15/	4	210	17.9	287.0	21.7	10.5	52.478	-84.5	15*42* 3	10.6			540			
3109	1	-125.67	17* 8*55	1/15/	4	210	18.3	286.9	21.6	10.6	52.473	-74.4	17*25*33	16.6			540			
3110	2	-150.34	18*46*19	1/15/	4	210	18.7	286.8	21.4	10.8	52.467	-69.3	18*56*33	10.2			540			
3126	3	174.89	20*44*48	1/16/	4	211	25.6	288.0	19.3	13.1	52.383	-70.9	21* 3*33	18.8			541			
3127	3	150.22	22*22*13	1/16/	4	211	26.0	288.0	19.2	13.2	52.378	-24.3	22*42* 3	19.8			541			
3128	3	125.55	23*59*37	1/16/	4	211	26.1	288.1	19.0	13.4	52.372	-57.6	0*21*33	21.9			541			
3129	3	100.88	1*37* 2	1/17/	4	212	26.2	288.1	19.1	13.5	52.367	-71.0	2* 2*33	25.5			541			
3137	1	-96.49	14*36*16	1/17/	4	212	27.2	288.8	19.8	14.1	52.325	-95.3	14*46* 3	9.8			542			
3139	2	-145.84	17*51* 5	1/17/	4	212	27.4	288.8	19.9	14.3	52.314	-95.4	18* 1* 3	10.0			542			
3141	3	164.81	21* 5*54	1/17/	4	212	27.6	288.9	20.0	14.5	52.304	-84.7	21*26*33	20.7			542			
3142	3	140.13	22*43*18	1/17/	4	212	27.8	288.9	20.0	14.5	52.298	-43.2	23* 3*33	20.3			542			
3143	3	115.46	C*20*42	1/18/	4	213	27.9	288.9	20.1	14.6	52.293	-71.8	0*44*33	23.9			542			
3144	2	90.79	1*58* 7	1/18/	4	213	28.0	289.0	20.1	14.7	52.288	-62.1	2*36* 8	38.0			542			
3153	2	-131.25	16*34*46	1/18/	4	213	29.0	289.7	20.7	15.5	52.240	-82.1	16*42*33	7.8			543			
3156	3	154.72	21*26*59	1/18/	4	213	29.3	289.9	20.9	15.7	52.225	-71.7	21*46*33	19.6			543			
3157	3	130.05	23* 4*23	1/18/	4	213	29.4	289.9	20.9	15.8	52.219	-73.2	23*26*33	22.2			543			
3158	3	105.38	C*41*48	1/19/	4	214	29.5	290.1	21.0	15.9	52.214	-59.3	1* 6*33	24.8			543			
3159	2	80.71	2*19*12	1/19/	4	214	29.6	290.3	21.1	16.0	52.209	-66.4	2*56*33	37.4			543			
3166	1	-91.99	13*41* 2	1/19/	4	214	30.3	291.1	21.6	16.8	52.172	-95.8	13*50*28	9.4			544			
3171	3	144.64	21*48* 4	1/19/	4	214	30.7	291.4	21.9	17.1	52.146	-60.5	22* 8*33	20.5			544			
3172	3	119.97	23*25*29	1/19/	4	214	30.8	291.5	21.9	17.2	52.140	-57.9	23*47*33	22.1			544			
3173	3	95.29	1* 2*53	1/20/	4	215	30.9	291.6	22.0	17.3	52.135	-47.2	1*28*33	25.7			544			
3181	1	-102.08	14* 2* 8	1/20/	4	215	31.5	292.7	22.4	18.1	52.093	-94.0	14*13* 3	10.9			545			

REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE							FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR CROSSING AT		SPIN		VECTOR		ATTITUDE		SPIN RATE (DEG /SEC)	BEGIN	E N D			DROPOUTS, MINUTES W/R/T AND					
		EARTH LONGI -TUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)			MINU -TES W/R/T AND	FROM- TO-							
3182	2	-126.75	15*39*32	1/20/ 4	215	31.6	292.8	22.5	18.2	52.088	-15.0	15*46*33	7.0					545				
3183	2	-151.42	17*16*56	1/20/ 4	215	31.7	292.9	22.5	18.3	52.082	-83.5	17*27*33	10.6					545				
3185	3	159.23	20*31*45	1/20/ 4	215	31.8	293.0	22.6	18.4	52.072	-57.3	20*53* 3	21.3					545				
3187	3	109.88	23*46*34	1/20/ 4	215	32.0	293.3	22.7	18.6	52.061	-47.4	0*10* 3	23.5					545				
3195	1	-87.51	12*45*49	1/21/ 4	216	32.5	294.5	23.1	19.4	52.019	-67.1	12*56* 3	10.2					546				
3196	1	-112.18	14*23*13	1/21/ 4	216	32.6	294.6	23.1	19.5	52.014	-80.3	14*36* 3	12.8					546				
3197	2	-136.86	16* 0*37	1/21/ 4	216	32.6	294.6	23.2	19.6	52.009	-79.0	16*10* 3	9.4					546				
3198	2	-161.53	17*38* 2	1/21/ 4	216	32.6	294.7	23.2	19.7	52.004	-82.1	17*50*33	12.5					546				
3199	3	173.78	19*15*26	1/21/ 4	216	32.7	294.8	23.3	19.8	51.998	-52.2	19*35*33	20.1					546				
3200	1	149.11	20*52*50	1/21/ 4	216	32.8	294.9	23.3	19.9	51.993	-70.8	21*27* 3	34.2					546				
3201	1	124.44	22*30*15	1/21/ 4	216	32.8	295.0	23.3	20.0	51.988	-56.0	23* 7* 3	36.8					546				
3202	3	99.77	0* 7*39	1/22/ 4	217	32.9	295.1	23.3	20.0	51.983	-48.0	0*33* 3	25.4					546				
3203	2	75.10	1*45* 3	1/22/ 4	217	33.0	295.3	23.3	20.1	51.978	-66.2	2*24* 3	39.0					546				
3210	1	-97.60	13* 6*54	1/22/ 4	217	33.3	296.3	23.6	20.8	51.941	-94.9	13*17* 3	10.2					547				
3211	1	-122.27	14*44*18	1/22/ 4	217	33.3	296.4	23.6	20.9	51.936	-81.8	14*58* 3	13.8					547				
3212	2	-146.94	16*21*42	1/22/ 4	217	33.4	296.5	23.7	21.0	51.930	-78.7	16*31*33	9.9					547				
3214	1	163.70	19*36*31	1/22/ 4	217	33.4	296.8	23.8	21.2	51.920	-69.3	20* 7* 3	30.5					547				
3215	1	139.03	21*13*56	1/22/ 4	217	33.5	296.9	23.8	21.3	51.915	-43.6	21*47*33	33.6					547				
3216	2	114.36	22*51*20	1/22/ 4	217	33.5	297.0	23.8	21.4	51.910	-32.2	23*23*33	32.2					547				
3217	2	89.68	C*28*44	1/23/ 4	218	33.6	297.2	23.8	21.5	51.904	-59.6	1* 4*33	35.8					547				
3225	1	-107.69	13*27*59	1/23/ 4	218	33.8	298.4	24.0	22.3	51.863	-31.8	13*39*33	11.6					548				
3226	2	-132.35	15* 5*23	1/23/ 4	218	33.8	298.5	24.0	22.4	51.858	-80.5	15*13* 3	7.7					548				
3227	2	-157.03	16*42*48	1/23/ 4	218	33.9	298.6	24.0	22.5	51.852	-84.4	16*55* 3	12.3					548				
3229	1	153.62	19*57*36	1/23/ 4	218	33.9	298.8	24.0	22.7	51.842	-72.0	20*30*33	33.0					548				
3230	3	128.94	21*35* 1	1/23/ 4	218	33.9	298.9	24.0	22.8	51.837	-22.0	21*56*33	21.5					548				
3231	2	104.27	23*12*25	1/23/ 4	218	34.0	299.1	24.0	22.9	51.832	-70.4	23*47* 3	34.6					548				

REACOUT										ORBIT				TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR CROSSING AT		SPIN VECTOR		ATTITUDE		SPIN RATE (DEG /SEC)	BEGIN	E N C		DROPOUTS, MINUTES W/R/T AND					
		EARTH LCNCL -TUDE (DEG)	ASCENDING HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)			MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND	TO-				
3239	1	-93.10	12*11*40	1/24/ 4	219	34.1	300.2	24.1	23.6	51.790	-94.2	12*21* 3	9.4			549			
3240	1	-117.77	13*49* 4	1/24/ 4	219	34.1	300.3	24.1	23.7	51.785	-80.1	14* 2* 3	13.0			549			
3241	2	-142.44	15*26*29	1/24/ 4	219	34.1	300.4	24.1	23.8	51.780	-79.1	15*36* 3	9.6			549			
3243	1	168.20	18*41*17	1/24/ 4	219	34.1	300.6	24.1	24.0	51.770	-74.9	19*11*33	30.3			549			
3244	1	143.53	20*18*42	1/24/ 4	219	34.1	300.7	24.1	24.0	51.765	-44.0	20*52*33	33.9			549			
3245	3	118.86	21*56* 6	1/24/ 4	219	34.1	300.8	24.1	24.1	51.759	-52.2	22*19* 3	23.0			549			
3246	2	94.19	23*33*30	1/24/ 4	219	34.1	300.9	24.1	24.2	51.754	18.6	0* 8*33	35.1			549			
3253	1	-78.51	10*55*21	1/25/ 4	220	34.1	301.8	24.1	24.9	51.718	-82.6	11* 5* 3	9.7			550			
3254	1	-103.18	12*32*45	1/25/ 4	220	34.1	301.9	24.1	24.9	51.713	-80.0	12*43* 3	10.3			550			
3255	1	-127.85	14*10* 9	1/25/ 4	220	34.1	302.0	24.1	25.0	51.708	-81.6	14*26* 3	15.9			550			
3256	2	-152.52	15*47*34	1/25/ 4	220	34.1	302.1	24.1	25.1	51.703	-76.0	15*58* 3	10.5			550			
3258	1	158.12	19* 2*22	1/25/ 4	220	34.1	302.2	24.1	25.3	51.693	-73.8	19*33*33	31.2			550			
3259	1	133.45	20*39*47	1/25/ 4	220	34.1	302.3	24.0	25.4	51.688	-60.0	21*14*33	34.8			550			
3260	3	108.78	22*17*11	1/25/ 4	220	34.1	302.4	24.0	25.5	51.682	-49.3	22*40*33	23.4			550			
3261	2	84.11	23*54*35	1/25/ 4	220	34.1	302.6	24.0	25.6	51.677	-68.1	0*31*33	37.0			550			
3268	1	-88.59	11*16*26	1/26/ 4	221	33.9	303.5	23.8	26.3	51.642	-96.1	11*25*28	9.0			551			
3269	1	-113.26	12*53*50	1/26/ 4	221	33.9	303.6	23.8	26.4	51.636	-83.0	13* 6* 3	12.2			551			
3270	2	-137.94	14*31*15	1/26/ 4	221	33.9	303.7	23.8	26.5	51.631	-78.7	14*40* 3	8.8			551			
3271	2	-162.61	16* 8*39	1/26/ 4	221	33.9	303.8	23.8	26.5	51.626	-82.4	16*22*33	13.9			551			
3272	1	172.71	17*46* 3	1/26/ 4	221	33.8	303.9	23.8	26.5	51.621	-74.3	18*16*33	30.5			551			
3273	1	148.04	19*23*29	1/26/ 4	221	33.8	304.0	23.7	26.6	51.616	-61.2	19*57*33	34.1			551			
3275	2	98.69	22*38*16	1/26/ 4	221	33.8	304.2	23.7	26.8	51.606	-69.6	23*13*33	35.3			551			
3283	1	-98.68	11*37*31	1/27/ 4	222	33.6	305.1	23.4	27.6	51.566	-94.7	11*47*33	10.0			552			
3284	1	-123.35	13*14*55	1/27/ 4	222	33.5	305.2	23.4	27.7	51.561	-82.3	13*28*33	13.6			552			
3285	2	-148.02	14*52*19	1/27/ 4	222	33.5	305.3	23.4	27.8	51.555	-72.8	15* 2* 3	9.7			552			
3287	1	162.62	18* 7* 8	1/27/ 4	222	33.5	305.5	23.3	28.0	51.548	-73.9	18*37*33	30.6			552			

REACOUT										ORBIT				TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT NODE (ANO)		SPIN -NA -TION (DEG)	VECTOR -R -SCEN -SION (DEG)	ATTITUDE		BEGIN MINU -TES W/R/T ANO	E N D		DROPOUTS, MINUTES W/R/T AND				
		EARTH LONGI -TUD E (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)			MINI -NUM NADIR (DEG)	TOT (MIN. AFTER ANO)		SPIN RATE (DEG /SEC)	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T ANO	FROM- TO-			
3288	1	137.96	19*44*32	1/27/	4	222	33.4	305.6	23.2	28.0	51.543	-61.2	20*17*33	33.0			552		
3289	2	113.28	21*21*57	1/27/	4	222	33.4	305.7	23.2	28.0	51.537	-58.4	21*54*33	32.6			552		
3290	2	88.61	22*59*21	1/27/	4	222	33.4	305.8	23.1	28.1	51.532	-58.9	23*36*33	37.2			552		
3298	1	-108.77	11*58*36	1/28/	4	223	32.8	307.2	22.8	29.0	51.489	-68.0	12* 9* 3	10.5			553		
3299	2	-133.45	13*36* 0	1/28/	4	223	32.7	307.4	22.8	29.1	51.484	-81.3	13*43*33	7.6			553		
3300	2	-158.12	15*13*25	1/28/	4	223	32.5	307.5	22.8	29.2	51.478	-84.3	15*24*33	11.1			553		
3302	1	152.53	18*28*13	1/28/	4	223	32.3	307.7	22.9	29.5	51.468	-73.2	18*59*33	31.3			553		
3303	1	127.86	20* 5*38	1/28/	4	223	32.2	307.9	22.9	29.6	51.462	-59.2	20*42* 3	36.4			553		
3304	2	103.18	21*43* 2	1/28/	4	223	32.1	308.2	22.8	29.7	51.457	-55.5	22*18* 3	35.0			553		
3305	2	78.51	23*20*26	1/28/	4	223	32.0	308.6	22.7	29.8	51.451	-57.0	0* 1* 3	40.6			553		
3312	1	-94.19	10*42*17	1/29/	4	224	30.3	310.9	22.8	30.9	51.413	-95.7	10*51*33	9.3			554		
3313	1	-118.86	12*19*41	1/29/	4	224	30.1	311.0	22.9	31.1	51.408	-83.0	12*33*33	13.9			554		
3314	2	-143.53	13*57* 5	1/29/	4	224	29.9	311.1	23.0	31.2	51.402	-78.6	14* 6*33	9.5			554		
3341	1	-89.68	9*47* 3	1/31/	4	226	22.7	316.9	2.	35.1	51.254	-41.9	9*55*33	8.5			555		
3342	1	-114.35	11*24*27	1/31/	4	226	22.4	316.9	23.3	35.2	51.249	-83.5	11*36*33	12.1			555		
3343	2	-139.03	13* 1*51	1/31/	4	226	22.0	317.0	23.4	35.3	51.243	-80.2	13*10*33	8.7			555		
3344	2	-163.70	14*39*16	1/31/	4	226	21.8	317.0	23.5	35.4	51.238	-84.4	14*53*33	14.3			555		
3345	1	171.62	16*16*40	1/31/	4	226	21.5	317.0	23.6	35.6	51.232	-34.3	16*47*33	30.9			555		
3346	1	146.95	17*54* 4	1/31/	4	226	21.3	317.1	23.6	35.7	51.227	-61.5	18*27* 3	33.0			555		
3347	3	122.28	19*31*29	1/31/	4	226	21.1	317.1	23.6	35.8	51.221	-43.3	19*57*33	26.1			555		
3356	1	-99.76	10* 8* 8	2/ 1/	4	227	20.7	317.7	22.3	36.6	51.171	-15.4	10*18*33	10.4			556		
3357	1	-124.44	11*45*32	2/ 1/	4	227	20.7	317.7	22.2	36.6	51.166	-81.6	12* 1*33	16.0			556		
3358	2	-149.11	13*22*56	2/ 1/	4	227	20.7	317.8	22.0	36.7	51.160	-76.6	13*33*33	10.6			556		
3360	1	161.54	16*37*45	2/ 1/	4	227	20.7	317.8	21.7	36.7	51.149	10.8	17*10*33	32.8			556		
3361	1	136.87	18*15* 9	2/ 1/	4	227	20.7	317.8	21.5	36.8	51.144	-58.6	18*52* 3	36.9			556		
3370	1	-85.18	8*51*48	2/ 2/	4	228	20.7	317.7	20.1	37.3	51.094	-96.9	9* 0* 3	8.3			557		

TIME INTERVAL OF FILE ON FMR TAPE

ORBIT NO.	CDA STA	REACOUT										ORBIT										TIME INTERVAL OF FILE ON FMR TAPE						FMR TAPE REEL NO.			
		SATELLITE ORBITAL				EQUATOR CROSSING AT				SPIN VECTOR				ATTITUDE				BEGIN		E N D				DROPOUTS, MINUTES W/R/T AND							
		EARTH LONGI-TUDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI-NATION (DEG)	RIGHT ASCEN-SION (DEG)	MINI-MUM NADIR (DEG)	TOT (MIN. AFTER AVO)	SPIN RATE (DEG /SEC)	MINU-TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU-TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU-TES W/R/T AND	FROM-	TO-														
3430	1	-125.54	10*16*	9	2/ 6/ 4	232	22.7	317.5	8.7	39.5	50.735	-81.4	10*32*58	16.8																561	
3431	2	-150.21	11*53*33		2/ 6/ 4	232	22.7	317.5	8.5	39.5	50.729	-76.1	12* 4* 3	10.5																	561
3433	1	160.43	15* 8*22		2/ 6/ 4	232	22.8	317.5	8.1	39.6	50.717	-73.4	15*39*33	31.2																	561
3434	3	135.76	16*45*46		2/ 6/ 4	232	22.8	317.4	7.9	39.7	50.711	-60.0	17* 7*33	21.8																	561
3435	3	111.09	18*23*10		2/ 6/ 4	232	22.9	317.4	7.7	39.7	50.705	-70.2	18*48* 3	24.9																	561
3436	2	86.41	20* 0*35		2/ 6/ 4	232	22.9	317.4	7.5	39.7	50.699	-64.9	20*40* 3	39.5																	561
3443	1	-86.28	7*22*25		2/ 7/ 4	233	23.5	317.3	6.0	39.9	50.657	-97.0	7*30*33	8.1																	562
3445	2	-135.63	10*37*14		2/ 7/ 4	233	23.6	317.3	5.5	40.0	50.644	-79.5	10*44*33	7.3																	562
3446	2	-160.30	12*14*38		2/ 7/ 4	233	23.7	317.3	5.3	40.0	50.638	-84.3	12*27*33	12.9																	562
3448	1	150.35	15*29*27		2/ 7/ 4	233	23.8	317.3	4.9	40.0	50.626	-72.2	15*50*33	21.1																	562
3449	3	125.67	17* 6*51		2/ 7/ 4	233	23.8	317.3	4.7	40.0	50.620	-57.9	17*29*33	22.7																	562
3450	3	101.00	18*44*15		2/ 7/ 4	233	23.9	317.3	4.4	40.0	50.614	-68.8	19*11* 3	26.8																	562
3451	2	76.33	20*21*40		2/ 7/ 4	233	24.0	317.2	4.2	40.1	50.608	-64.2	21* 2* 3	40.4																	562
3458	1	-96.36	7*43*30		2/ 8/ 4	234	24.6	317.1	2.7	40.2	50.565	-94.7	7*53*33	10.1																	563
3459	1	-121.04	9*20*54		2/ 8/ 4	234	24.7	317.1	2.5	40.2	50.559	-80.9	9*34*58	14.1																	563
3460	2	-145.71	10*58*19		2/ 8/ 4	234	24.8	317.1	2.2	40.3	50.552	-78.3	11* 7*33	9.2																	563
3461	2	-170.58	12*35*43		2/ 8/ 4	234	24.8	317.1	2.0	40.3	50.546	-83.1	12*51* 3	15.3																	563
3462	3	164.94	14*13* 7		2/ 8/ 4	234	24.9	317.1	1.8	40.3	50.540	-75.8	14*33* 3	19.9																	563
3464	3	115.59	17*27*56		2/ 8/ 4	234	25.0	317.1	1.3	40.4	50.528	-69.8	17*52* 3	24.1																	563
3465	2	90.92	19* 5*20		2/ 8/ 4	234	25.1	317.1	1.0	40.4	50.521	-67.0	19*43* 3	37.7																	563
3472	1	-81.78	6*27*11		2/ 9/ 4	235	25.8	316.9	-0.5	40.4	50.483	-95.7	6*36*33	9.4																	564
3473	1	-106.45	8* 4*35		2/ 9/ 4	235	25.9	316.9	-0.7	40.4	50.477	-82.0	8*15*33	11.0																	564
3474	2	-131.12	9*41*59		2/ 9/ 4	235	26.0	316.9	-1.0	40.5	50.465	-12.3	9*48*33	6.6																	564
3475	2	-155.79	11*19*24		2/ 9/ 4	235	26.1	316.9	-1.2	40.5	50.459	-14.0	11*30* 3	10.7																	564
3487	1	-91.86	6*48*16		2/10/ 4	236	27.2	316.6	-3.9	40.6	50.393	-13.8	6*57*33	9.3																	565
3488	1	-116.53	8*25*40		2/10/ 4	236	27.3	316.6	-4.1	40.6	50.387	-22.2	8*38*33	12.9																	565

ORBIT NO.	CDA STA	REACOUT					ORBIT					TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.		
		SATELLITE ORBITAL		EQUATOR CROSSING AT		SPIN	VECTOR	ATTITUDE		BEGIN	E N D		DROPOUTS, MINUTES						
		EARTH LONGITUDE (DEG)	ASCENDING NODE (AND)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE			TIROS DAY	DECLINATION (DEG)		RIGHT ASCENSION (DEG)	MINIMUM NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	MINUTES W/R/T AND	HOURS MINUTES SECONDS (GMT)		MINUTES W/R/T AND	FROM- TO-
3489	2	-141.21	10* 3* 4	2/10/ 4	236	27.4	316.6	-4.3	40.6	50.371	-12.8	10*11*33	8.5			565			
3490	2	-165.88	11*40*29	2/10/ 4	236	27.5	316.6	-4.6	40.6	50.364	-13.4	11*55* 3	14.6			565			
3492	3	144.77	14*55*17	2/10/ 4	236	27.6	316.6	-5.0	40.7	50.352	-13.2	15*15*33	20.3			565			
3501	1	-77.29	5*31*56	2/11/ 4	237	28.7	316.5	-7.2	40.8	50.309	-22.3	5*40*33	8.6			566			
3502	1	-101.97	7* 9*21	2/11/ 4	237	28.8	316.5	-7.4	40.8	50.303	-13.0	7*19* 3	9.7			566			
3503	1	-126.64	8*46*45	2/11/ 4	237	28.7	316.4	-7.7	40.7	50.298	-13.0	9* 3*33	16.8			566			
3504	2	-151.31	10*24* 9	2/11/ 4	237	28.6	316.4	-7.8	40.7	50.275	-13.1	10*35*33	11.4			566			
3516	1	-87.38	5*53* 1	2/12/ 4	238	27.4	316.1	-9.2	41.4	50.198	-12.3	6* 2* 3	9.0			567			
3517	1	-112.05	7*30*26	2/12/ 4	238	27.3	316.0	-9.3	41.5	50.192	-13.0	7*42*33	12.1			567			
3518	2	-136.72	9* 7*50	2/12/ 4	238	27.2	316.0	-9.4	41.5	50.185	-12.2	9*16*33	8.7			567			
3519	2	-161.39	10*45*14	2/12/ 4	238	27.1	315.9	-9.5	41.6	50.179	-11.7	10*58*33	13.3			567			
3521	3	149.25	14* 0* 3	2/12/ 4	238	27.0	315.8	-9.8	41.6	50.166	-12.3	14*21*33	21.5			567			
3531	1	-97.46	6*14* 6	2/13/ 4	239	26.0	315.7	-11.1	42.2	50.101	-94.5	6*24*33	10.5			568			
3532	1	-122.13	7*51*31	2/13/ 4	239	25.9	315.6	-11.2	42.2	50.094	-81.6	8* 7*33	16.0			568			
3533	2	-146.81	9*28*55	2/13/ 4	239	25.8	315.5	-11.3	42.3	50.088	-76.5	9*38*33	9.6			568			
3534	2	-171.48	11* 6*19	2/13/ 4	239	25.8	315.5	-11.4	42.3	50.081	-82.0	11*21*33	15.2			568			
3535	3	163.84	12*43*44	2/13/ 4	239	25.7	315.4	-11.6	42.4	50.075	-76.3	13* 4*33	20.8			568			
3536	3	139.17	14*21* 8	2/13/ 4	239	25.6	315.3	-11.7	42.4	50.068	-71.2	14*41*33	20.4			568			
3537	3	114.49	15*58*32	2/13/ 4	239	25.6	315.3	-11.8	42.5	50.062	-71.5	16*24* 3	25.5			568			
3538	2	89.82	17*35*57	2/13/ 4	239	25.5	315.3	-11.9	42.5	50.055	-21.0	18*13* 3	37.1			568			
3545	1	-82.87	4*57*47	2/14/ 4	240	24.8	315.2	-13.0	42.8	50.010	-95.4	5* 6*33	8.8			569			
3546	1	-107.54	6*35*11	2/14/ 4	240	24.7	315.2	-13.1	42.9	50.003	-41.8	6*46*33	11.4			569			
3547	2	-132.22	8*12*35	2/14/ 4	240	24.6	315.1	-13.2	42.9	49.997	-80.0	8*20*33	8.0			569			
3548	2	-156.89	9*50* 0	2/14/ 4	240	24.5	315.0	-13.3	43.0	49.990	-83.9	10* 1*33	11.6			569			
3549	3	178.43	11*27*24	2/14/ 4	240	24.4	314.9	-13.4	43.0	49.983	-79.6	11*46* 3	18.7			569			
3550	3	153.75	13* 4*48	2/14/ 4	240	24.4	314.9	-13.5	43.1	49.977	-73.7	13*23*33	18.8			569			

READOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE						FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR CROSSING AT		SPIN VECTOR		ATTITUDE		SPIN RATE (DEG /SEC)	BEGIN	E N D			DROPOUTS, MINUTES W/R/T AND						
		EARTH LCNGI -TIDE (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)			MINU -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND	FROM-	TO-					
3551	3	129.08	14*42*13	2/14/ 4	240	24.3	314.8	-13.6	43.1	49.970	-73.4	15* 3*33	21.3				569				
3552	3	104.41	16*19*37	2/14/ 4	240	24.2	314.8	-13.8	43.2	49.964	-70.0	16*43*33	23.9				569				
3553	2	79.74	17*57* 1	2/14/ 4	240	24.1	314.8	-13.9	43.2	49.957	-65.8	18*36* 3	39.0				569				
3560	1	-92.96	5*18*52	2/15/ 4	241	23.5	314.6	-14.9	43.5	49.911	-95.1	5*28*33	9.7				570				
3561	1	-117.63	6*56*16	2/15/ 4	241	23.4	314.5	-15.0	43.6	49.905	-82.5	7* 8*33	12.3				570				
3562	2	-142.30	8*33*40	2/15/ 4	241	23.3	314.4	-15.1	43.6	49.898	-79.5	8*42*33	8.9				570				
3563	2	-166.98	10*11* 5	2/15/ 4	241	23.2	314.3	-15.2	43.7	49.892	-83.1	10*25*33	14.5				570				
3564	1	168.34	11*48*29	2/15/ 4	241	23.2	314.3	-15.3	43.7	49.885	-74.5	12*18*33	30.1				570				
3565	3	143.67	13*25*53	2/15/ 4	241	23.1	314.2	-15.4	43.7	49.878	-61.7	13*45*33	19.7				570				
3566	3	119.00	15* 3*18	2/15/ 4	241	23.1	314.2	-15.6	43.8	49.872	-72.5	15*26*33	23.3				570				
3567	2	94.33	16*40*42	2/15/ 4	241	23.0	314.1	-15.7	43.8	49.865	-66.4	17*19* 3	38.4				570				
3574	1	-78.37	4* 2*32	2/16/ 4	242	22.3	314.0	-16.8	44.2	49.819	-94.5	4*12*33	10.0				571				
3575	1	-103.04	5*39*57	2/16/ 4	242	22.3	314.0	-16.9	44.2	49.812	-82.3	5*50*33	10.6				571				
3576	2	-127.72	7*17*21	2/16/ 4	242	22.2	313.9	-17.0	44.2	49.806	-81.7	7*24*33	7.2				571				
3577	2	-152.39	8*54*45	2/16/ 4	242	22.1	313.8	-17.1	44.3	49.799	-84.1	9* 5*33	10.8				571				
3578	3	-177.06	10*32*10	2/16/ 4	242	22.1	313.7	-17.2	44.3	49.793	-40.4	10*50* 3	17.9				571				
3579	3	158.26	12* 9*34	2/16/ 4	242	22.0	313.6	-17.3	44.4	49.786	-73.4	12*28*33	19.0				571				
3580	3	133.59	13*46*58	2/16/ 4	242	22.0	313.6	-17.5	44.4	49.779	-73.4	14* 7*33	20.6				571				
3581	3	108.91	15*24*23	2/16/ 4	242	21.9	313.5	-17.6	44.5	49.773	-70.5	15*48*33	24.2				571				
3582	2	84.24	17* 1*47	2/16/ 4	242	21.8	313.5	-17.7	44.5	49.766	-66.2	17*40*33	36.8				571				
3589	1	-88.46	4*23*37	2/17/ 4	243	21.2	313.2	-18.7	44.9	49.720	-4.3	4*32*33	8.9				572				
3590	1	-113.13	6* 1* 2	2/17/ 4	243	21.1	313.2	-18.9	44.9	49.713	-82.3	6*12*33	11.5				572				
3591	2	-137.80	7*38*26	2/17/ 4	243	21.1	313.1	-19.0	45.0	49.707	-80.2	7*46*33	8.1				572				
3592	2	-162.47	9*15*50	2/17/ 4	243	21.0	313.0	-19.1	45.0	49.700	-84.3	9*30*33	14.7				572				
3593	3	172.85	10*53*15	2/17/ 4	243	21.0	312.9	-19.2	45.1	49.693	-73.4	11*12*33	19.3				572				
3594	3	148.18	12*30*39	2/17/ 4	243	20.9	312.8	-19.3	45.0	49.687	-72.2	12*50*33	19.9				572				

REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE						
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR CROSSING		AT (AND)		SPIN	VECTOR		ATTITUDE		SPIN RATE (DEG /SEC)	BEGIN	E N D			DROPOUTS, MINUTES W/R/T AND		FMR TAPE REEL NO.	
		EARTH LCNGI -TUDE (DEG)	ASCENDING NODE	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)		RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	MINU -TES W/R/T AND			HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T AND	FROM-	TO-			
3595	3	123.50	14* 8* 3	2/17/ 4	243			20.9	312.8	-19.5	45.0	49.680	-71.8	14*30*33	22.5				572		
3596	3	98.83	15*45*27	2/17/ 4	243			20.8	312.8	-19.6	45.1	49.673	-68.5	16*10* 3	24.6				572		
3597	2	74.15	17*22*52	2/17/ 4	243			20.7	312.7	-19.7	45.1	49.667	-65.4	18* 2*33	39.7				572		
3604	1	-98.55	4*44*42	2/18/ 4	244			20.1	312.5	-20.8	45.5	49.620	-35.8	4*56*33	11.9				573		
3605	2	-123.22	6*22* 6	2/18/ 4	244			20.1	312.4	-20.9	45.6	49.614	-80.1	6*30*33	8.5				573		
3606	2	-147.89	7*59*31	2/18/ 4	244			20.0	312.4	-21.1	45.6	49.607	-83.5	8* 9*33	10.0				573		
3608	3	162.75	11*14*19	2/18/ 4	244			19.9	312.2	-21.3	45.7	49.594	-82.2	11*35*33	21.2				573		
3609	3	138.08	12*51*44	2/18/ 4	244			19.9	312.1	-21.4	45.7	49.587	-70.8	13*12*33	20.8				573		
3611	2	88.74	16* 6*32	2/18/ 4	244			19.7	312.0	-21.7	45.8	49.574	-63.3	16*44* 3	37.5				573		
3620	2	-133.31	6*43*11	2/19/ 4	245			18.9	311.6	-22.9	46.2	49.514	-81.5	6*50*33	7.4				574		
3621	2	-157.98	8*20*36	2/19/ 4	245			18.9	311.5	-23.0	46.3	49.508	-83.5	8*32*33	12.0				574		
3623	3	152.67	11*35*24	2/19/ 4	245			18.8	311.3	-23.2	46.4	49.494	-73.2	11*54*33	19.2				574		
3624	3	128.60	13*12*49	2/19/ 4	245			18.7	311.3	-23.4	46.4	49.488	-72.0	13*35* 3	22.2				574		
3626	2	78.65	16*27*37	2/19/ 4	245			18.5	311.2	-23.6	46.5	49.475	-61.6	17* 7* 3	39.4				574		
3636	2	-168.06	8*41*41	2/20/ 4	246			17.7	310.5	-24.8	46.9	49.408	-83.8	8*56*33	14.9				575		
3637	3	167.26	10*19* 5	2/20/ 4	246			17.6	310.4	-24.9	47.0	49.402	2.1	10*39*33	20.5				575		
3638	3	142.59	11*56*29	2/20/ 4	246			17.6	310.3	-25.1	47.0	49.395	-71.0	12*16*33	20.1				575		
3639	3	117.91	13*33*54	2/20/ 4	246			17.5	310.3	-25.2	47.1	49.388	-70.7	13*57* 3	23.2				575		
3640	2	93.24	15*11*18	2/20/ 4	246			17.4	310.2	-25.3	47.1	49.382	-64.8	15*48* 3	36.8				575		
3649	2	-128.80	5*47*57	2/21/ 4	247			16.5	309.7	-26.5	47.5	49.322	-81.5	5*55* 3	7.1				576		
3654	2	107.83	13*54*59	2/21/ 4	247			15.3	308.8	-26.3	47.9	49.289	-48.4	14*31* 3	36.1				576		
3655	2	83.16	15*32*23	2/21/ 4	247			15.0	308.8	-26.3	48.0	49.283	-51.1	16* 9*33	37.2				576		
3663	1	-114.21	4*31*37	2/22/ 4	248			12.5	308.0	-26.3	48.9	49.230	-81.9	4*43*33	11.9				577		
3664	2	-138.89	6* 9* 2	2/22/ 4	248			12.3	307.8	-26.2	49.0	49.223	-72.8	6*18* 3	9.0				577		
3667	3	147.09	11* 1*15	2/22/ 4	248			11.6	307.2	-26.0	49.1	49.203	-71.5	11*20*33	19.3				577		
3669	2	97.75	14*16* 3	2/22/ 4	248			11.0	307.0	-25.9	49.3	49.190	-53.6	14*51* 3	35.0				577		

REACOUT														ORBIT				TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR ASCENDING		CROSSING AT NODE (ANO)		SPIN		VECTOR		ATTITUDE		BEGIN MINU -TES W/R/T ANO	E N D		DROPOUTS, MINUTES W/R/T ANO						
		EARTH LONGI -TUD (DEG)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI -NA -TION (DEG)	RIGHT ASCEN -SION (DEG)	MINI -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	HOURS MINUTES SECONDS (GMT)	MINU -TES W/R/T ANO	FROM- TO-										
3677	1	-99.63	3*15*18	2/23/ 4	249	8.5	306.5	-26.0	50.2	49.138	-88.8	3*24*33	9.3				578						
3678	1	-124.30	4*52*42	2/23/ 4	249	8.3	306.3	-25.9	50.3	49.131	-76.1	5* 6*33	13.9				578						
3679	2	-148.97	6*30* 7	2/23/ 4	249	8.1	306.1	-25.8	50.4	49.125	-72.4	6*40* 3	9.9				578						
3683	2	112.33	12*59*44	2/23/ 4	249	7.1	305.4	-25.6	50.7	49.098	-60.3	13*32*33	32.8				578						
3684	2	87.66	14*37* 8	2/23/ 4	249	6.8	305.4	-25.6	50.8	49.092	-52.2	15*13*33	36.4				578						
3691	1	-85.64	1*58*59	2/24/ 4	250	4.6	304.9	-25.5	51.5	49.048	-87.6	2* 6*33	7.6				579						
3692	1	-109.71	3*36*23	2/24/ 4	250	4.4	304.7	-25.5	51.6	49.042	-78.1	3*46*53	10.5				579						
3693	2	-134.38	5*13*47	2/24/ 4	250	4.2	304.5	-25.4	51.7	49.035	-74.9	5*21*33	7.8				579						
3694	2	-159.05	6*51*12	2/24/ 4	250	3.9	304.3	-25.3	51.7	49.029	-77.1	7* 2*33	11.4				579						
3696	3	151.59	10* 6* 0	2/24/ 4	250	3.5	303.9	-25.2	51.9	49.016	-71.9	10*24*33	18.6				579						
3698	2	102.25	13*20*49	2/24/ 4	250	3.0	303.7	-25.1	52.0	49.003	-55.0	13*55*33	34.7				579						
3706	1	-95.13	2*20* 3	2/25/ 4	251	0.5	303.4	-25.2	52.9	48.951	-67.8	2*28*33	8.5				580						
3707	1	-119.80	3*57*28	2/25/ 4	251	0.3	303.2	-25.1	53.0	48.945	-72.8	4*10*33	13.1				580						
3708	2	-144.48	5*34*52	2/25/ 4	251	0.1	303.0	-25.0	53.0	48.938	-73.0	5*43*33	8.7				580						
3711	1	141.50	10*27* 5	2/25/ 4	251	-0.5	302.5	-24.9	53.3	48.919	-59.9	11* 0*33	33.5				580						
3721	1	-105.21	2*41* 8	2/26/ 4	252	-3.4	301.9	-24.7	54.3	48.856	-80.8	2*51*33	10.4				581						
3722	2	-129.88	4*18*32	2/26/ 4	252	-3.7	301.7	-24.6	54.4	48.850	-75.7	4*25* 3	6.5				581						
3723	2	-154.56	5*55*57	2/26/ 4	252	-3.9	301.5	-24.6	54.4	48.844	-79.3	6* 6*33	10.6				581						
3725	1	156.09	9*10*45	2/26/ 4	252	-4.3	301.2	-24.4	54.5	48.832	-62.7	9*42*33	31.8				581						
3727	2	106.74	12*25*34	2/26/ 4	252	-4.8	301.0	-24.3	54.7	48.819	-41.6	12*59* 3	33.5				581						
3735	1	-90.62	1*24*49	2/27/ 4	253	-7.1	300.9	-24.4	55.6	48.770	-89.9	1*32*33	7.7				582						
3736	1	-115.30	3* 2*13	2/27/ 4	253	-7.3	300.7	-24.3	55.7	48.764	-78.4	3*14*33	12.3				582						
3737	2	-139.97	4*39*37	2/27/ 4	253	-7.5	300.6	-24.3	55.8	48.758	-73.9	4*47*33	7.9				582						
3740	1	146.01	9*31*50	2/27/ 4	253	-8.1	300.1	-24.1	56.0	48.740	5.1	10* 3*33	31.7				582						
3742	2	96.66	12*46*39	2/27/ 4	253	-8.7	299.9	-24.0	56.1	48.728	-42.1	13*21*33	34.9				582						
3750	1	-100.71	1*45*53	2/28/ 4	254	-10.9	299.7	-23.9	57.0	48.680	-90.0	1*55* 3	9.2				583						

REACOUT										ORBIT					TIME INTERVAL OF FILE ON FMR TAPE					FMR TAPE REEL NO.
ORBIT NO.	CDA STA	SATELLITE ORBITAL		EQUATOR CROSSING AT		SPIN		VECTOR		ATTITUDE		BEGIN		E N D		DROPOUTS, MINUTES W/R/T AND				
		EARTH LONGI- TUD E (DFC)	HOURS MINUTES SECONDS (GMT)	CALENDAR DATE	TIROS DAY	DECLI- -NA- -TION (DEG)	RIGHT ASCEN- -SION (DEG)	MINI- -MUM NADIR (DEG)	TOT (MIN. AFTER AND)	SPIN RATE (DEG /SEC)	MINU- -TES W/R/T AND	HOURS MINUTES SECONDS (GMT)	MINU- -TES W/R/T AND	FROM-	TO-					
3751	2	-125.38	3*23*18	2/28/ 4	254	-11.7	299.4	-23.8	57.1	48.674	-73.5	3*29*33	6.3				583			
3752	2	-150.05	5* 0*42	2/28/ 4	254	-12.4	299.0	-23.2	57.2	48.668	-79.9	5*10*33	9.9				583			
3754	1	160.59	8*15*30	2/29/ 4	254	-13.8	298.3	-22.1	57.6	48.657	-62.5	8*46*33	31.1				583			
3755	1	135.92	5*52*55	2/28/ 4	254	-14.6	298.2	-21.6	57.7	48.651	-54.4	10*27*33	34.6				583			
3756	2	111.25	11*30*19	2/28/ 4	254	-15.5	298.1	-21.2	57.8	48.645	-50.9	12* 2*33	32.2				583			
3757	2	86.58	13* 7*44	2/28/ 4	254	-16.4	298.3	-20.7	58.1	48.639	-52.9	13*46* 3	38.3				583			
3764	1	-86.12	0*29*34	2/29/ 4	255	-22.5	299.9	-18.6	60.0	48.598	-85.7	0*37*33	8.0				584			
3771	2	101.17	11*51*24	2/29/ 4	255	-27.3	299.5	-15.8	61.1	48.558	10.4	12*25*33	34.2				584			

APPENDIX B

SUBPOINT TRACK SUMMARY OF AVAILABLE RADIATION DATA

In this section, the time interval for which radiation data are available on the FMR tapes for TIROS VII from October 1, 1963, to February 29, 1964, is summarized diagrammatically by means of subpoint tracks for each interrogation day. As discussed pre-

viously, an interrogation day may be contained within the calendar day, or it may consist of 2 calendar days. This method of presentation enables the data user to quickly appraise the orbits containing data in an area of interest. Additional information illustrating the use of the Subpoint Track Summaries is explained in Appendix B, Volume 1.

